Conservation & Management Plan for Marina del Rey, Los Angeles County, California

August 19, 2010

Prepared By

Robert A. Hamilton & Daniel S. Cooper
Hamilton Biological, Inc.

316 Monrovia Avenue
Long Beach, CA 90803
robb@hamiltonbiological.com
562-477-2181

Prepared For

County of Los Angeles

Department of Beaches & Harbors
13837 Fiji Way
Marina del Rey, CA 90292

Department of Regional Planning
320 West Temple Street
Los Angeles, CA 90012

We, the authors of this conservation and management plan, attest that we believe all information in this document to be true, and that both of us support the findings and recommendations presented herein.

Robert A. Hamilton
President, Hamilton Biological, Inc.

Daniel S. Cooper
President, Cooper Ecological Monitoring, Inc.

TABLE OF CONTENTS

Tables

Appendices

Executive Summary

Sixty years ago, the area around lower Ballona Creek comprised a vast wetland of saltmarsh and mudflats, teeming with birds and wildlife, and characterized by low scrub with virtually no trees. Marina del Rey was established here in the early 1960s, and today the area represents an active recreation hub and residential community, centered on one of the largest marinas on the Pacific Coast. In recent decades, the marina's arboreal landscaping has matured into an "urban forest" that has been adopted as nesting habitat for a variety of colonial waterbirds and other wildlife species adapted to urban coastal settings. Our research indicates that colonial herons, egrets, and cormorants probably did not nest at the historical Ballona Wetlands, including the area now occupied by Marina del Rey. During the decades before breeding colonies were established, these birds occurred regularly in the local area as winter visitors and migrants, although typically in smaller numbers than we see today. Since the late 1990s, several species of nesting colonial waterbirds have undergone major population increases statewide, exploiting human activities at numerous harbors, marinas, reservoirs, and similar settings, where non-native landscape trees are typically used for nesting. Playing a role in this large-scale phenomenon, Marina del Rey now supports a combined total of more than 100 breeding pairs of Double-crested Cormorants, Black-crowned Night-Herons, Great Blue Herons, Great Egrets, and Snowy Egrets.

Some waterbird species that nest at the marina are widespread in the Los Angeles area, but a few are much more localized, and their local populations depend on the artificial and natural habitats provided by Marina del Rey and the nearby Ballona Wetlands. In parts of Marina del Rey, the waste that accumulates beneath nesting colonies has become a nuisance and potential human health hazard, and conflicts between waterbirds and human users of the marina have been increasing. In recent years, nesting waterbirds have concentrated in three main areas at the marina, the largest being within the tall eucalyptus and ficus trees along Admiralty Way between Oxford Basin and the Ritz-Carlton Hotel, including those around a large parking lot at Yvonne B. Burke Park. Other large nesting colonies are found around the Coast Guard Station and Fisherman's Village at the end of Fiji Way, and on the opposite/western side of the marina entrance, near Mariner's Village. Birds from these colonies, as well as from smaller ones scattered around Marina del Rey, forage and roost widely in the marina and the adjacent Ballona Wetlands, but are concentrated during the spring/summer nesting season around their food sources: Oxford Basin and the two bait docks on either side of the marina channel entrance.

In southern California, mild winters and year-round food supplies mean that the "nesting season" is not well-defined, although activity is typically highest in spring and summer, and lowest in late fall. In most cases, trees with nesting herons and egrets may be readily identified by large white stains on the ground below, resembling spilled paint (called "whitewash" or "guano"). All of Marina del Rey's landscape trees, including those used by nesting birds, require occasional pruning or, in some cases, removal. In recent years these actions have been guided by the Department of Beaches and Harbor's Policy No. 23, "Tree Pruning in Marina del Rey and on County Beaches in Accordance with Native Bird Breeding Cycles." Either coincidentally or not, Marina del Rey's waterbird colonies have generally expanded and diversified during the years this policy has been in place, and we believe that the policy effectively supports the continued existence of colonial waterbirds in the marina. The policy is consistent with State and federal laws that prohibit the disturbance of nesting birds except in consultation with the California Department of Fish and Game and the U.S. Fish and Wildlife Service.

We recognize, however, that most waterbird colonies in Marina del Rey are in some degree of conflict with intended human uses of the marina, and that the public and regulators seek assurance that such conflicts will not eventually lead to persecution of the birds through disturbance of their nesting trees. We recommended that the County provide this assurance by (1) extending the County's existing tree-pruning policy to cover all leaseholders in Marina del Rey, and (2) amending the policy to include review and approval by a biologist before any waterbird nest could be removed or rendered unusable as a result of non-emergency pruning deemed necessary by an arborist or other landscape specialist. These recommendations have been adopted by the County. We further recommend that the County conduct waterbird population surveys, preferably on an annual basis, to track the status of colonies and to provide current information on the locations of active nests to the public, the County, resource agencies, and other regulators.

This plan also recommends that surveys for nesting colonial waterbirds be conducted on the coastal slope of Los Angeles County at regular intervals (e.g., every 3–5 years), in order to be able to establish a regional context for the Marina del Rey colonies.

This plan recommends against establishing additional non-native trees or man-made structures for nesting waterbirds at Marina del Rey, taking into consideration (a) lack of evidence that these species nested in the local area historically; (b) the potential for conflict between colonial waterbirds and species of conservation concern in the local area, especially the California Least Tern; and (c) the potential for conflict between colonial waterbirds and established human uses of the marina. We also recommend against replacing nesting trees if they should be rendered unusable through natural/normal use by the birds. Rather, to the extent possible, we believe that natural processes should guide habitat management decisions marina-wide.

The management approaches recommended in this plan are subject to modification based on the findings of local, State and federal biologists and applicable environmental law. For example, if the State were to declare the Great Egret (one of the locally nesting colonial waterbirds) a Species of Special Concern, this could necessitate greater protection for that species. Or, if it were learned that individuals of a particular heron colony at the marina were preying on California Least Tern chicks at nearby Venice Beach, State or federal wildlife agencies might intervene to remove "problem" individuals or otherwise limit the colony size.

This plan also provides management goals and recommendations for the two remaining quasi-natural areas in Marina del Rey: Oxford Basin, a flood-control facility located between Washington Boulevard and Admiralty Way that is operated and maintained by the Los Angeles County Flood Control District (LACFCD), and "Wetland Park," a small parcel of open space at the corner of Via Marina and Tahiti Way, both of which have been selected for enhancement projects with public use and habitat benefits. Both areas (as well as the adjacent Ballona Wetlands Ecological Reserve along Fiji Way) have the potential to support a variety of bird and wildlife species that visitors to the marina and local residents and their children would enjoy observing. As Oxford Basin serves a critical flood protection role for the surrounding community, all proposed enhancements and policies for Oxford Basin must be consistent with the operation and maintenance needs of the LACFCD.

Finally, this plan identifies several additional "species of conservation concern" that were displaced by the development of the marina, evaluates their potential for re-establishment, and provides recommendations for where and how habitat restoration may benefit them.

1.0 INTRODUCTION & PURPOSE

1.1 Introduction

The County of Los Angeles (County) commissioned Robert A. Hamilton, president of Hamilton Biological, Inc., to prepare this Conservation and Management Plan (Plan). Hamilton Biological teamed with a second biologist, Daniel S. Cooper, president of Cooper Ecological Monitoring, Inc., who participated in all aspects of fieldwork, historical research, development, and authorship of the Plan. Both authors possess extensive experience studying the avifauna of the Los Angeles Area, including the Ballona Valley, and are highly qualified to provide the conservation and management recommendations contained in this Plan. Appendix A provides their Curricula Vitae.

1.2 Purpose

The County has commissioned this Plan in response to the Periodic Review by the California Coastal Commission (Commission) of Marina del Rey's certified Local Coastal Program (LCP). This review was initiated in 2005, its final findings were adopted in October 2008, and the findings were received by the County on 30 April 2009[1]. The Commission submitted to the County recommendations for actions to be considered that would more fully implement the Coastal Act. Within a year following submission of any recommendations, the County is required, if the recommended action is not taken, to forward to the Commission a report setting forth its reasons for not taking the recommended action. The County has elected to respond to Recommendations 43–62, concerning "Biological Resources and Environmentally Sensitive Habitat Areas (ESHA)," (the "Recommendations") by initiating this Plan and including related new resource protection and management policies in an LCP amendment.

For Marina del Rey, many of the Commission's Recommendations refer specifically to nesting colonies of herons, egrets, and cormorants (collectively referred to in this document as "colonial waterbirds") and the non-native trees they use for nesting. A review conducted by the authors (this study) has found that these colonial waterbird species are generally increasing in number and breeding range in Los Angeles County and elsewhere along the coastal slope of southern California, described below. Their recent and ongoing colonization of Marina del Rey has precipitated conflicts between the birds, which produce conspicuous accumulations of guano, and such existing land uses as swimming pools, parking lots, and restaurants with outdoor seating. Guanotrophy (poisoning of the soil and scalding of plant life through guano accumu-

[1]Adopted Revised Findings to support the Commission's January 9, 2008 approval of the Los Angeles County's Marina del Rey Periodic LCP Review staff report and recommendations. Published online at http://www.coastal.ca.gov/recap/mdr/mdr-adopted-5-mm9.pdf

lation below nesting or roosting trees) apparently caused one nesting tree to topple and crush an automobile in Marina del Rey in 2008 (A. Culbertson, pers. comm.), and airborne particles of guano could pose a health risk through psittacosis, a bacterial infection that can cause severe pneumonia and other serious health problems for humans (Harkinezhad et al. 2009). Land-use/bird conflicts remain a concern at Marina del Rey, though planned redevelopment efforts that could involve removal of trees used by colonial waterbirds on some parcels have recently been suspended or scaled back due to economic concerns. The County is using this time to study the issue and the Recommendations, and to develop this Plan, which includes a number of ecologically sound policies designed to responsibly resolve conflicts between birds and humans, and which provide for long-term accommodation and enhancement of biological resources throughout Marina del Rey.

Members of the public and the Coastal Commission, through their recommendations, regard colonial nesting birds as important components of the local natural community for several reasons: they are native species that are protected by law (as are all nesting birds), and they are "high-order predators" that prey upon and otherwise interact with other species of wildlife in the local area, including fish, small mammals, and potentially other birds. Not insignificantly, they are conspicuous, charismatic birds with a strong "following" in the local community. A necessary outcome of the County's ongoing planning and management processes is to develop and implement policies that protect existing waterbird colonies while acknowledging the pressures such colonies may place upon other sensitive natural resources and the need to strike an appropriate balance between native wildlife populations, colonial waterbirds, and continued human uses of Marina del Rey. Thus, this Plan considers colonial waterbirds in detail, which has entailed:

Using historical information to reconstruct the historical status and distribution of colonial waterbirds in the local area;

Researching and describing the current status and distribution of colonial waterbirds elsewhere on the coastal slope of Los Angeles County to evaluate the relative importance of local colonies;

Identifying and describing the principal breeding locations of the various colonial waterbird species in Marina del Rey;

Conducting field work to understand how each colonial waterbird species uses different parts of the local landscape to fulfill such basic ecological requirements as roosting and foraging;

Reviewing the published literature concerning potential human disturbances upon nesting colonial waterbirds;

- Evaluating how these medium- and large-sized predators could potentially interact with listed/protected or otherwise biologically "sensitive" species in the local area;
- Identifying areas within Marina del Rey that have good potential to provide increased biological value for native plants and wildlife following appropriate restoration and habitat enhancement actions; and
- Developing appropriate restoration, conservation, and management policies to address the wildlife-related issues we have identified in Marina del Rey and surroundings.

The purpose of this Plan is outlined as follows:

1. To catalog all native bird species that regularly occur, or that are known to have historically occurred regularly at Marina del Rey, focusing on documenting the historical and current status of species of conservation concern[2].
2. To describe the current and historical status of colonial waterbirds (herons, egrets, and cormorants) that nest at Marina del Rey.
3. To document and describe how colonial waterbirds are utilizing habitats in Marina del Rey and surrounding areas, including the adjacent Ballona Wetlands.
4. To evaluate the range of effects that nesting populations of colonial waterbirds at Marina del Rey could have upon other species that occur in the local area.
5. To identify known or potential conflicts that have arisen, or that may arise, between wildlife and existing or planned human uses of Marina del Rey.
6. To identify areas within Marina del Rey where the potential exists to restore or re-establish appropriate native habitats.
7. To provide a management strategy that encourages the perpetuation of Marina del Rey's existing colonial waterbird populations at self-sustaining and ecologically appropriate levels, recognizing (a) that state and/or federal resource agencies may have valid reasons to place limits on the size and/or location of a given waterbird colony, and (b) that colonies are likely to naturally shift and fluctuate over time for reasons outside of human control.
8. To establish a planning framework that takes into account relevant information about and analyses of wildlife at Marina del Rey, and that establishes best manage-

[2] For purposes of this Plan, such species include federally and state-listed species, California Species of Special Concern, and any other native bird species known to have experienced serious declines in, or extirpation from, the local area.

ment practices appropriate for its unique landscape, resources, and surrounding land uses.

This planning framework referred to above has two overarching goals: a) to promote the long-term conservation of all native species that exist in, or that may be expected to return to, Marina del Rey, including surrounding open space areas, focusing especially on the most vulnerable, globally-scarce, and otherwise biologically sensitive species; and b) to diminish the potential for conflicts between wildlife populations and both existing and planned human uses of Marina del Rey (to the benefit of humans and wildlife alike).

This document provides recommendations for resource management policies. If any sensitive resources are proposed for impacts as part of future redevelopment, this would have to be addressed on a project-by-project basis in compliance with CEQA (e.g., through preparation of an EIR). In some cases, provision of replacement habitat could represent necessary mitigation in compliance with CEQA. Preferably, such mitigation would be compatible with the resource management policies identified in this plan, but this would not necessarily be the case if new information is presented that shows that a different mitigation would be suitable. In fact, the annual review suggested in this report anticipates that resource management policies will be adapted to changing situations—the essence of adaptive management. The County Department of Regional Planning intends to develop a "visioning plan" for Marina del Rey that will include policies to guide future development and redevelopment of the marina. We recommend that no established rookery sites be removed until this future "visioning" process is complete. Any adaptive management changes should be made in the visioning process.

In developing this Plan, the project biologists have carefully considered concerns and recommendations expressed by the Coastal Commission and its staff, and the Plan contains numerous resource protection elements derived directly from those recommendations. However, certain recommendations we have reviewed do not comport with the facts as we have observed them at Marina del Rey during the course of this study and in our prior experience, and some past recommendations have overlooked how habitat creation and management actions that favor one group of species may disfavor other species that are more threatened on a global level, or that require greater legal protection (see memorandum from Hamilton to Andi Culbertson, August 22, 2007). For example, we do not believe that non-native, deliberately-planted trees at Marina del Rey that support nesting colonial waterbirds rise to the level of ESHA as described in Section 30107.5 of the Coastal Act (nor do they satisfy the criteria given in Section 4.3.B in the City of Malibu LCP/LIP). Nevertheless, we recognize that the area's waterbird colonies represent ecological assets that warrant conservation and a well-considered approach to resource management. We believe that the conservation and management strategies described in this Plan are ecologically sound, being supported by our field observations as well as a thorough review of the published literature (see Section 7.0). For this reason, we expect the policies recommended here to be approved and supported by regulatory agencies both now and in the future.

2.0 METHODS

Robert A. Hamilton (RAH) and Daniel S. Cooper (DSC) prepared this draft Conservation and Management Plan, and our work builds upon previous and concurrent work by Dr. Jeffrey B. Froke, who has been studying colonial-nesting waterbirds in Marina del Rey and elsewhere in the region for several years. We have also considered Section 4.4.2 of the City of Malibu LCP Local Implementation Plan (LIP), which describes methods to be followed for biological reports prepared in conjunction with specific development projects in or near biologically sensitive areas (although we do not consider those methods directly applicable to the development of this marina-wide conservation and management plan, which is not part of a permit application).

2.1 Historical Research

RAH compiled the anthropocentric (human-centered) history of Marina del Rey from four main sources:

County of Los Angeles, Department of Beaches and Harbors. Undated. The History of Marina del Rey. Available online: <http://beaches.co.la.ca.us/BandH/Marina/MdRhistory.htm>.

Dukesherer. D. J. 2009. Beach of the King: The Early History of Playa Del Rey, Westchester, Playa Vista, California (Volume 1). Cental Historical Group Publishing.

Marinadelrey.com. 2009. *The complete guide to Marina del Rey*. A history of the area prepared by marina delrey.com. Available online: <http://www.marinadelrey.com/history.html>.

Wikipedia entry for "Marina del Rey." Available online: <http://en.wikipedia.org/wiki/Marina_del_Rey,_California>.

DSC compiled and interpreted the known historical conditions and bird communities in and around the Ballona Valley. For many years, DSC has been researching and studying the current and historical bird communities of the region, and the Ballona/Venice/Marina del Rey area in particular; see Cooper (2006, 2008). The bio-centric history of Marina del Rey and surrounding areas, contained in Section 3.2.2 of this plan, represents a synthesis of relevant information from many sources, especially the following:

Boland, J.M., and J.B. Zedler. 1991. *The functioning of Ballona Wetland in relation to tidal flushing: Part I – Before tidal restoration.* Pp. 1-53 *in* City of Los Angeles. 1992. Draft environmental impact report for first phase project for Playa Vista; master plan project for Playa Vista: Technical Appendices. Vol. X, Appendix J: Biotic Resources. City of Los Angeles, Los Angeles, Calif.

Chambers, W.L. 1936. *The hunter in southern California versus wild animal life.* Condor 38:199-202.

Cooke, T.D. 1946. *The proposed bird sanctuary at Playa del Rey*. Western Tanager 13:5.

Corey, K.C. 1992. *Bird survey of Ballona Wetland, Playa del Rey, California 1990-1991.* Pp. 1-41 in City of Los Angeles. 1992. Draft environmental impact report for first phase project for Playa Vista; master

plan project for Playa Vista: Technical Appendices. Vol. X, Appendix J: Biotic Resources. City of Los Angeles, Los Angeles, CA.

County of Los Angeles, Department of Beaches and Harbors. Undated. The History of Marina del Rey. Available online: <http://beaches.co.la.ca.us/BandH/Marina/MdRhistory.htm>.

County of Los Angeles, Department of Small Craft Harbors. 1976. Draft Environmental Impact Report, Proposed Japanese-American cultural garden, Marina del Rey. August 19, 1976.

Crockett, M. Undated. Westchester history. Available online: <http://www.laxcoastal.com/EN/ComRessources/Overview/WestHist.shtml>.

Dock, C. F., and Schreiber, R. W. 1981. *The Birds of Ballona. in* R.W. Schreiber, ed. 1981. *The Biota of the Ballona Region, Los Angeles County* (Supplement I of Marina del Rey/Ballona Local Coastal Plan). Los Angeles County Natural History Museum Foundation.

Froke, J. B. 2007. *Marina del Rey heronry report for 2005-2006*. Report dated 1 February 2007 prepared for the County Of Los Angeles Dept. of Beaches & Harbors and Lyon Capital Management, Newport Beach, CA.

Fuller, B.T. 1955. *Help! Cry the Los Angeles County waterbirds.* Western Tanager 22:17.

Garrett, K.L. 2001. *Birds of the Baldwin Hills.* Pp. 77-126 *in* K. Molina, ed., Biota of the Baldwin Hills, Los Angeles County, California. Community Conservancy International and Natural History Museum of Los Angeles County Foundation, Los Angeles, CA.

Garrett, K., and J. Dunn. 1981. *Birds of southern California: status and distribution.* Los Angeles Audubon Society, Los Angeles, CA.

Grinnell. J. 1898. *Birds of the Pacific slope of Los Angeles County*. Pasadena Academy of Sciences No. 2.

Jurek, R.M. 1992. *Nonnative Red Foxes in California.* California Department of Fish and Game, Wildlife Management Division, Nongame Bird and Mammal Section Report 92-04.

Mattoni, R., and T.R. Longcore. 1997. *The Los Angeles coastal prairie, a vanished community.* Crossosoma 23:71-102.

Robinson, W.W. 1939. Culver City: a calendar of events, in which is included, also, the story of Palms and Playa del Rey together with Rancho La Ballona and Rancho Rincon de los Bueyes. Available online: <http://www.cheviothills.org/Ranchos.htm>.

Schreiber, R. W., and Dock, C. F. 1980. *The birds of the bird conservation area, Marina del Rey, Los Angeles County.* Report to Department of Small Craft Harbors, County of Los Angeles, Marina del Rey, CA.

Splitter, H.W. 1951. *Birds in Los Angeles County seventy-five years ago.* Western Tanager 18:3.

von Bloeker, J. C. 1943. *The fauna and flora of the El Segundo sand dunes: Birds of El Segundo and Playa del Rey.* Bulletin of the Southern California Academy of Sciences 42:1–30 (Part 1) and 90–103 (Part 2).

Willett, G. 1933. A revised list of the birds of southwestern California. Pacific Coast Avifauna 21.

Worsfold, D.I. Undated. My 50 years in Palms. Available online: <http://www.cheviothills.org/history.htm>.

Zedler, J.B. 1982. The ecology of southern California coastal salt marshes: a community profile. FWS/OBS-81/54, U.S. Fish and Wildlife Service, Washington, D.C.

In addition, DSC has requested and reviewed the unpublished notes of several local birders, including Kimball Garrett, Kevin Larson, Art and Jean Pickus and Robert Shanman, and has conducted extensive museum research to determine historical habitat conditions and species assemblages in the Ballona/Marina del Rey/Venice area[3].

2.2 Recent & Current Research in the Ballona Area

2.2.1 Recent Research of the Authors & Collaborators

From 2003 to present, DSC has conducted quarterly and breeding bird surveys of Ballona Freshwater Marsh and the Playa Vista Riparian Corridor, and he has also conducted bird surveys of the Ballona Wetlands for the Ballona Wetlands Foundation and the Santa Monica Bay Restoration Foundation. In addition to this consulting work, DSC lives near the project area and has an abiding personal interest in the birds of this area, and frequently visits the area independent of any work obligations to study the local avifauna.

In 2006, RAH conducted a series of eight breeding bird surveys of the Ballona Freshwater Marsh. In 2006 and 2007, he worked with Peter H. Bloom and Terry L. Master to evaluate the situation of Great Blue Herons nesting near the Villa Venetia Apartments in southern Marina del Rey and to develop initial recommendations for conserving the birds and avoiding conflicts with the planned redevelopment of that part of the marina. Earlier, in 1996, RAH conducted a series of ten breeding bird surveys for the future Playa Vista Riparian Corridor, and in 1998 he conducted and a series of eight focused surveys for Southwestern Willow Flycatchers (*Empidonax traillii extimus*) and Least Bell's Vireos (*Vireo bellii pusillus*) in the same area.

From July 2005 to present, Jeffrey B. Froke has been studying the nesting ecology and nest-site preferences of colonial waterbirds within Marina del Rey. His work is relatively constant (on a monthly basis 12 months per year) to detect pre-nesting and post-nesting colony activities. His principal study species at Marina del Rey is the Great Blue Heron. Although his work encompasses the entire marina environment, Froke particularly focuses on the sub-colony along Fiji Way, near Villa Venetia. In addition to surveys and monitoring, his activities include analyzing the potential for actively managing Great Blue Herons in Marina del Rey, and deliberating on conservation alternatives to support their continued and successful breeding in the area.

---

[3] In addition, field notes were requested of local observers David DeLange and Robert Van de Hoek in December 2009 (by DSC), but none has been provided to date.

2.2.2 CURRENT RESEARCH OF THE AUTHORS

The following sources were used to identify endangered, threatened, or other "special status" species potentially occurring in Marina del Rey:

- California Department of Fish and Game (CDFG), Natural Diversity Data Base. 2009a. Search report dated 9 July 2009 for the Venice, Beverly Hills, Hollywood, Inglewood, Torrance, and Redondo Beach USGS quadrangles.
- CDFG, Natural Diversity Data Base. 2009b. Special Animals. List dated July 2009.
- CDFG, Natural Diversity Data Base. 2010. Special Vascular Plants, Bryophytes, and Lichens List. List dated January 2010.
- Consortium of California Herbaria, plant records from Marina del Rey, Ballona, Venice, Playa del Rey, and Del Rey Lagoon; search reports dated 17 August 2009.

RAH and DSC conducted a total of 19 field visits during spring and summer 2009. Three of these visits, between 20 May and 23 June, were conducted with the primary purpose of determining the locations and sizes of nesting colonies used by colonial waterbirds in Marina del Rey, including the Double-crested Cormorant (*Phalacrocorax auritus*), Great Blue Heron, Great Egret (*Ardea alba*), Snowy Egret (*Egretta thula*), and Black-crowned Night-Heron. We counted numbers of nests visible from the ground, marked them on aerial photographs, and made notes on the numbers of adults, fledglings, and juveniles visible at each colony[4]. Copies of our notes are provided in Appendix B.

To obtain a snapshot of habitat usage during the nesting season, RAH and DSC surveyed locally-breeding waterbird species roosting or foraging at wetland and other habitats in the Marina del Rey/Playa del Rey area on 16 dates between 29 June and 30 July. For purposes of our study, stationary birds that are not at their nest site nor are actively foraging are considered to be "roosting." Roosting may take the form of standing on the ground (especially Great Blue Heron) or perching in a tree or on a structure (egrets, cormorant). Birds roost in groups at especially favored sites, but can also be found roosting alone throughout the local area. Most of the surveyed sites were selected by DSC, based on six years of professional monitoring and birding experience in the area. These sites were surveyed along a route that took between two and three hours to complete. In some cases, additional time was spent obtaining photographs of birds using the sites. Sites were visited between 06:45 and 18:45, with 10 visits

[4] In some cases it was not possible to determine the species responsible for certain nests, as no bird was present, but we attempted to discern between nests that were likely used in 2009 versus old nests through such cues as whitewash beneath this year's nests and cobwebs in old nests.

beginning before 12:00 noon, and six visits after noon. This allowed us to compare bird usage at different tide heights across the survey, as low tide during July was typically in the early morning, and high tide in the afternoon. Most sites were small and compact, allowing for quick observation of birds. Individuals were recorded by age (i.e., adult vs. immature), but a small number of distant birds, particularly Snowy and Great egrets, were difficult to age at a distance, and were left as "age unknown."

Our 2009 field surveys did not start until late May, well into the breeding season, which for Great Blue Herons begins in late winter. We are aware that some Great Blue Herons and Black-crowned Night-Herons had already completed nesting, and that others were finishing up nesting, by the time our surveys started. Still, all species surveyed had at least some active nests during the entire survey period, and Double-crested Cormorants, Great Egrets, and Snowy Egrets generally seemed to be in the middle of nesting when our surveys commenced. We generally counted nests as having been active in 2009 if we found accumulations of recent whitewash below them, even if nesting at the location had been completed. What is important, for purposes of developing this plan, is not that we were able to find every active nest or closely monitor nesting activities, but that we were able to find all nesting-season concentrations and to evaluate how the adults and juveniles were utilizing the landscape in and around Marina del Rey during and after the nesting season. We thus believe that we gathered enough information from our field visits in spring/summer 2009 to estimate population sizes, characterize how the various species were using the resources of Marina del Rey and surrounding areas, and to recommend appropriate measures to safeguard those uses in the future. The current waterbird survey efforts by RAH, DSC, and J. B. Froke are important because, as documented by Cooper (2006, 2008), colonial waterbirds are recent colonists of Marina del Rey and no comparable research effort has been undertaken to document the status of their populations or their patterns of habitat usage.

A secondary focus of our colonial waterbird assessment was to determine the locations and at least the approximate sizes of other waterbird colonies on the coastal slope of Los Angeles County, to serve as a comparison to the Marina del Rey colonies. We accomplished this with field visits to known or likely areas during July and August 2009, and by making inquiries (including posts on the Los Angeles County birding listserve) with colleagues and birders in the Los Angeles County area who may have monitored colonies, or who may have had knowledge of colonies not known to us. Through this process, we believe that we obtained a reasonably complete understanding of the current status and distribution of colonial-nesting herons, egrets, and cormorants on the coastal slope of Los Angeles County. We are unaware of any comparable effort to document the current status of these birds in the County, including the Los Angeles County Breeding Bird Atlas effort (unpublished), which ended fieldwork in 1999, before the recent surge of nesting colonial waterbirds in the region.

Part of our work involved evaluating the County's existing policy for *Tree Pruning in Marina del Rey and on County Beaches in Accordance with Native Bird Breeding Cycles*, which has been in effect since 5 December 2006. As part of this effort, we reviewed the April 2009 version of the Los Angeles Audubon Society's *Guide to Bird-friendly Tree and Shrub Trimming and Removal* (Los Angeles Audubon Society 2009). We have consulted with the County on the preparation of a new tree-pruning policy that shall apply to all leaseholds in Marina del Rey (see Appendix F to this plan).

3.0 SETTING

3.1 Overview of Marina del Rey

Marina del Rey is an 807-acre enclave located on the central coast of Los Angeles County (Figure 3–1). The County of Los Angeles (County) owns Marina del Rey and leases out its land and water resources to private individuals and corporations on long-term lease agreements. Open water accounts for half of Marina del Rey's acreage, and the community is strongly associated with boating and other coastal-recreation activities. The area includes boat slips, rental apartments, condominiums, hotels, offices, restaurants, and retail space.

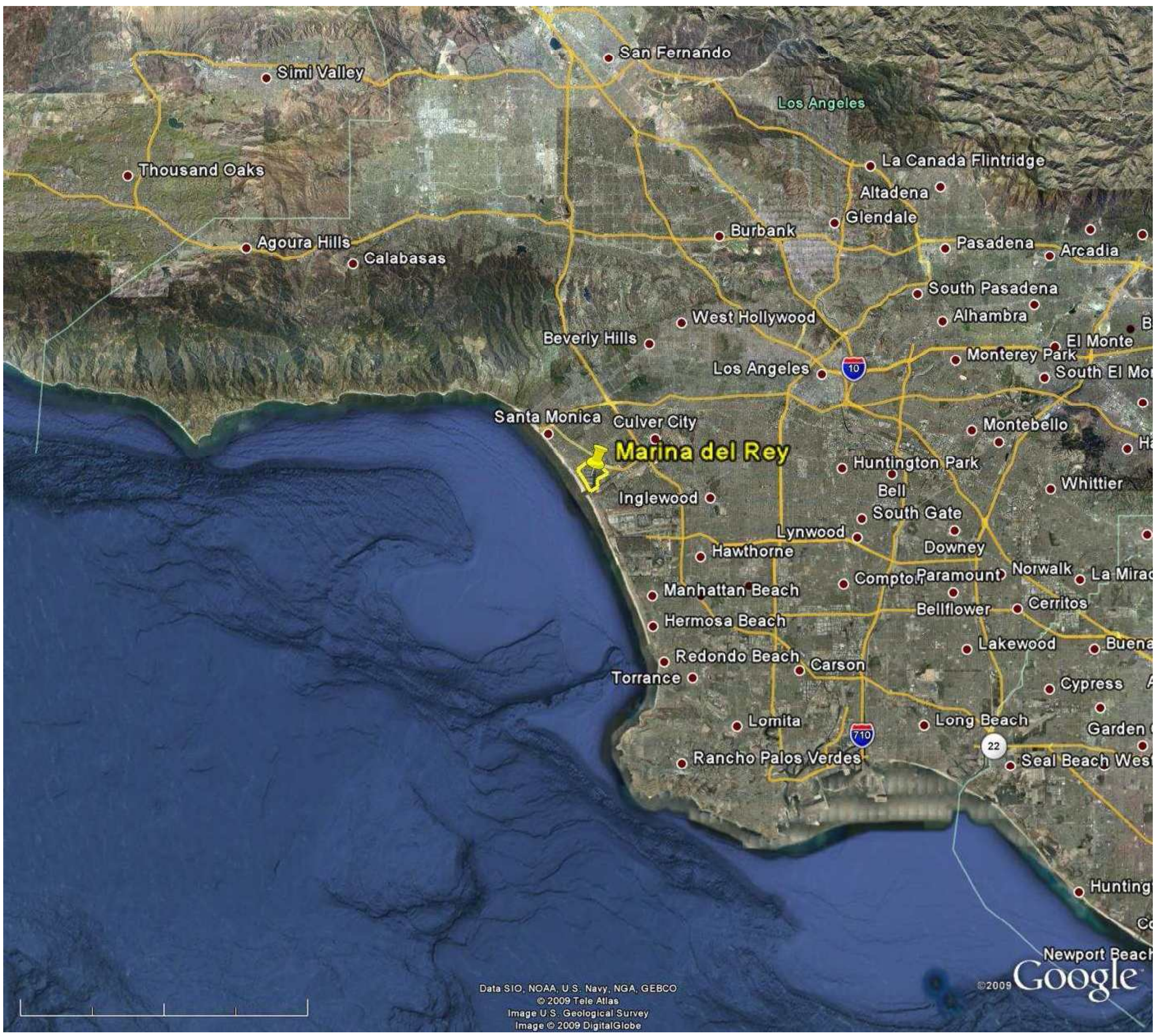


Figure 3–1. Regional location of Marina del Rey, on the central coast of Los Angeles County.

Marina del Rey is roughly bounded by Washington Boulevard to the north, Lincoln Boulevard to the east, Fiji Way and the south jetty of the entrance to Marina del Rey the south, and Via Marina to the west (Figure 3–2).

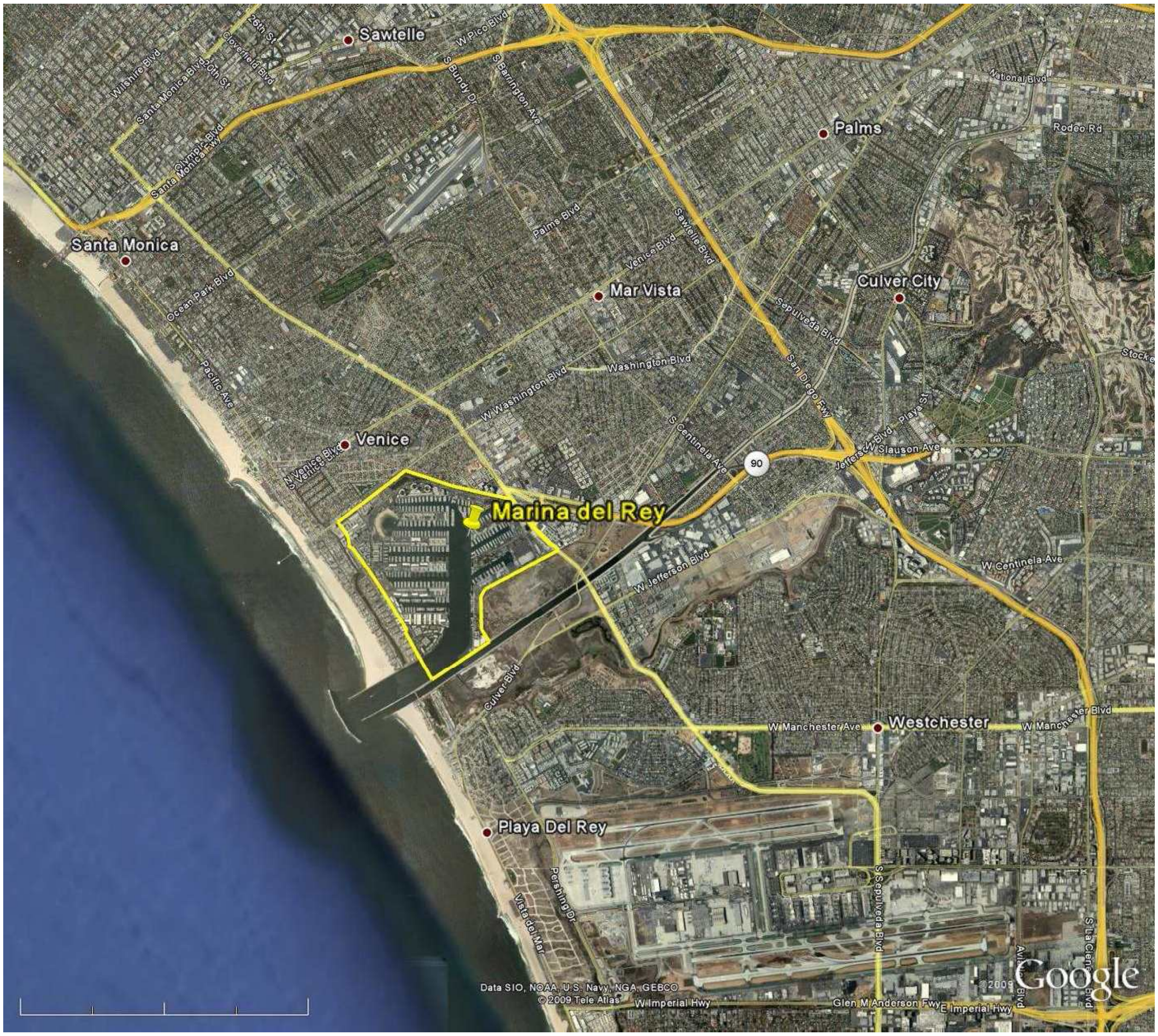


Figure 3–2. Local setting. Surrounding communities, all within the City of Los Angeles, include Playa del Rey, Westchester, Mar Vista, and Venice. Los Angeles International Airport is visible in the southern part of this aerial image.

Figure 3–3, below, shows (in red) the five principal nesting sites used by large numbers of colonial waterbirds in Marina del Rey during 2009. Additional minor nesting areas, and roosting areas, used by smaller numbers of birds, are scattered around the marina.

Based on our research in 2009, the most important *foraging* areas for herons and egrets in Marina del Rey itself are Oxford Basin and two live-bait tanks used by sport-fishermen, one located on the west side of the marine entrance to Marina del Rey at the southern end of Bora Bora Way, and the other on the east side at Fisherman's Village. Herons and egrets were found to routinely roost and forage in other areas, as well, including in Area A of the Ballona Wetlands, adjacent to Marina del Rey; Ballona Lagoon, which is the southern extension of the "Grand Canal" at Venice; Del Rey Lagoon; Ballona Wetlands (Area B); Ballona Freshwater Marsh; and Ballona Creek (esp. the "Centinela Confluence," where the Centinela Channel feeds into Ballona Creek). Just north of the mouth of Marina del Rey, on Venice Beach, is a fenced-off nesting area for the federally and state-listed California Least Tern.

Figure 3–3. Areas of biological interest in and around Marina del Rey. The yellow outline represents the Marina del Rey LCP boundary.

3.2 History of Marina del Rey

Marina del Rey is a man-made feature that occupies the historical estuary at the mouth of Ballona Creek. The history of Marina del Rey in relation to its natural resources may be addressed in two intertwined narratives, one biocentric (natural) and the other anthropocentric (human-centered).

3.2.1 Biocentric (Natural) History

Essential to the task of evaluating and addressing the conservation and management needs of Marina del Rey is understanding the history of the natural resources of the original site, and how they have changed with the transformation of a former natural estuary into a largely man-made marina. Prior to the arrival of Europeans, the Ballona area was an ancient estuary of the Los Angeles River, with the mouth of the river entering the Pacific Ocean north of the Westchester Bluffs, forming a broad coastal plain with seasonal and permanent wetlands extending north and east toward higher ground in present-day Santa Monica (description in Cooper 2008). A long range of natural sand dunes cut off the ocean from the majority of the low-lying ground, which featured a network of tidal channels and extensive salt marsh (i.e., the historical "Venice Marshes" or "Ballona Wetlands"). Until a flood in the early 1800s, the Los Angeles River emptied at Santa Monica Bay, along the current course of Ballona Creek (Gumprecht 2001).

Because agriculture in the Ballona area was in full swing by the late 1800s, prior to the widespread availability of cameras and photographs, it is impossible to know with absolute certainty what the pre-agricultural Ballona Wetlands would have looked like. We can, however, infer the likely presence or absence of various habitats based on the topography, soils, hydrology, proximity to marine influence, and consideration of what other similar estuarine systems in the area look like in the absence of major human interventions. The historical landscape along the coast west of present-day Lincoln Boulevard (i.e., an area encompassing all of Marina del Rey) likely consisted of wide tidal channels and mudflats, salt marshes, coastal dunes, pockets of freshwater and/or brackish marsh, as well as riparian scrub. Also present was a coastal prairie community described by researchers as far back as the 1930s (e.g., "the meadow" referred to by von Bloeker 1943). These are generally the habitat types typical of coastal estuaries throughout southern California and northwestern Baja California, Mexico (see, e.g., Grewell et al. 2007, Pickart and Barbour 2007). Comparable coastal estuaries on broad plains in southern California include Carpinteria Marsh, Mugu Lagoon, Alamitos Bay, Bolsa Chica, Upper Newport Bay, and the Tijuana River Estuary, and those in northwestern Baja California include the Estero Río Guadalupe and Estero Punta Banda; all are characterized by the habitats listed above and not by tall native trees. Where tall trees do occur near coastal estuaries in the region, such as at Goleta Slough and Malibu Lagoon, those trees are almost invariably introduced by people. At Ballona, tall native trees such as California sycamores (*Platanus racemosa*) and coast live oaks

(*Quercus agrifolia*) were likely confined to upstream reaches of Ballona Creek, as suggested by historical photos of Ballona Creek near present-day Culver City (see Cooper 2008).

Figure 3–4. Photo taken in 1941 (prior to construction of Marina del Rey), view northwest, showing flooded conditions along the lower reach of (channelized) Ballona Creek, with Venice and Santa Monica in the background. Photo published online at http://ballona-news.blogspot.com/

Figure 3–5. Photo taken some time around 1950 showing the "Venice Marshes." The view is to the southeast, toward Westchester Bluffs. The route of Lincoln Boulevard through the bluffs is visible behind the telephone pole. Photo from the personal collection of Herbert Clarke, used with permission.

By the mid-1900s, much of Ballona Creek had been excavated and routed through a channel, at first earthen (1920s), then concrete-lined (late 1930s), principally to control floods in the Ballona Valley that regularly destroyed cropland and generally hindered development. The most serious and final impact to lower Ballona Creek and the majority of its natural wetlands came in the early 1960s, with the completion of Marina del Rey, which eliminated nearly all the functional wetlands north of the Ballona Creek channel and left only a small remnant to the south, along Culver Boulevard. However, just as the creation of Marina del Rey development entailed the elimination of certain natural habitats, it created novel ones, with the addition of hundreds of evergreen, semi-tropical, trees, as well as irrigated lawns and man-made structures.

As reviewed by Cooper (2008), many bird species associated with freshwater marsh, coastal lagoon, and riparian habitats were lost from the Ballona area during the early period of development (pre-1930s); many saltmarsh species, including waterfowl and shorebirds that occurred in large flocks, suffered heavy losses during the middle period (1940s to 1960s); and since the 1960s, many open-country species, particularly those of agricultural fields and extensive grasslands, have either been extirpated or experienced serious declines.

Cooper (2006) documented the ongoing colonization of the local area by bird species that require tall trees for breeding and/or foraging, and by species frequently associated with human habitation. This colonization phenomenon has intensified as the Marina's non-native landscaping has matured, providing much more structural complexity than was present formerly, but at the expense of numerous species that depend on natural, wild habitats for their persistence in the landscape or for refueling during long migrations.

This plan does not seek to eliminate or reduce the local populations of any such "recent-colonist" species, but it does recognize that, in most cases, the local and regional populations of these species are expanding without any targeted conservation measures (beyond, for example, the generic protections offered by the federal Migratory Bird Treaty Act and Sections 3503, 3503.5, and 3513 of the California Fish and Game Code). Thus, this plan is careful not to overemphasize the protection of popular but well-adapted species, such as colonial waterbirds, at the expense of locally native species that have fared poorly in the (artificially) tree-filled landscape that has characterized the Marina del Rey area since the 1960s. Rather, it draws attention to native species that still depend on the relict natural habitats in and around the Marina as well as those extirpated species that could become re-established here with modest restoration of their habitats.

3.2.2 Anthropocentric (Human-centered) History

Following a long history of usage by native peoples, in 1839 the Playa del Rey Estuary became part of a Mexican land grant of 13,920 acres called Rancho La Ballona, with a salt works added in the 1850s and a formal hunting operation in the 1870s (Dukesherer 2009). The area was a popular destination for duck-hunters and small numbers of beach-goers from Los Angeles through the early 1900s, after which time its popularity increased greatly, and human usage of the beaches soared. Well into the 1900s, areas of the wetlands and coastal plain were used for oil extraction, particularly in the historical dune system west of present-day Marina del Rey. Still, vast areas of wetland remained, and duck-hunting continued at several freshwater impoundments along Washington Boulevard into the 1950s, near the present-day Oxford Basin (Cooper 2005).

After a failed attempt by the Ballona Development Company to convert the estuary into a commercial harbor between 1887 and 1890, and despite a series of governmental reports that found the area unsuitable for the establishment of a major commercial harbor, the U.S. Army Corps of Engineers (Corps) ultimately determined in 1949 that the area could be feasibly developed into a recreational marina. In 1953 the Los Angeles County Board of Supervisors sponsored State legislation that resulted in the County a receiving a $2 million loan from State tidelands oil revenues to pursue purchase of the new harbor site. In 1954, President Dwight D. Eisenhower signed legislation that committed the federal government to provide matching funds to the County to create the marina's main navigational features. Two years later, County voters approved a bond that financed the remainder of the project, and project construction commenced in December 1957.

During the winter of 1962-63, shortly after the harbor's initial opening, Marina del Rey suffered severe storm damage that prompted an emergency program to implement corrective measures already being developed and tested by the Corps. As an interim measure, the County constructed temporary protective sheet-pile baffles at the harbor's entrance, but ultimately the project required a permanent, offshore breakwater. With the federal government and County splitting the $4.2 million cost, construction of the breakwater began in October 1963 and was completed in January 1965. April 10, 1965, marked the formal dedication of Marina del Rey Harbor.

Figure 3–6. Photo from around 1960 showing the recently-completed Marina prior to construction of the offshore breakwater. Photo published online at http://beaches.co.la.ca.us/BandH/Marina/MdRhistory.htm

Today, Marina del Rey contains more than 4,700 recreational boat slips, numerous restaurants, and boat launching ramps that provide access to tens of thousands of trailer-class boats annually. The County operates the marina to provide a wide range of coastal recreational opportunities to County residents and visitors from all over the world. The area is home to Burton W. Chace Park, Yvonne B. Burke Park, Marina Beach, and Oxford Basin (formerly dedicated by the County as a "Bird Conservation Area"), and supports regattas, crew races, boat parades, sailing races, park concerts, harbor cruises, handicapped swim ramps, a playground, boat rentals and sailing instruction. In addition, the Marvin Braude Bike Trail (part of a 20-mile coastal bicycle path) crosses the Marina, and the north jetty promenade and view piers, fishing docks, sportfishing concessions, a Marina Information Center, and a County Library with a large nautical section are among the popular public amenities. The County is continually planning the future of Marina del Rey, and this marina-wide conservation and management plan represents an integral part of the County's comprehensive and ongoing planning of the marina environment.

3.2.3 AN HISTORICAL REVIEW OF NESTING HERONS & EGRETS AT MARINA DEL REY

Herons and egrets have long been recorded in the Ballona/Venice area, but the first breeding record did not come until 1995, when "small numbers" of Great Blue Herons "nested in the lone cottonwood on the western edge of the Ballona Wetlands," with subsequent colonization of non-native landscaping trees in Marina del Rey by this and other colonial waterbirds (Cooper 2006). In order to evaluate reports that colonial-nesting herons and egrets long ago nested at the historical Ballona Wetlands, and are now "re-colonizing[5]," we conducted an extensive review of the scientific record and museum records, as well as a review of historical information on the types of vegetation likely present at the historical estuary and surrounding wetlands and coastal bluffs (see the preceding section and also Cooper 2008).

Both Great and Snowy Egrets were probably common in the Ballona/Venice area prior to the 1880s, when both species were decimated for the feather trade (e.g., Grinnell 1898, Willett 1933, Grinnell and Miller 1944). There is no direct way of knowing whether either species may have nested in the local area prior to that early population crash because the ornithological record is weak before 1898 (when Joseph Grinnell published *Birds of the Pacific slope of Los Angeles County*). Nevertheless, multiple lines of reasoning

---

[5] See, for example, page 175 of the *Adopted Revised Findings to support the Commission's January 9, 2008 approval of the Los Angeles County's Marina del Rey Periodic LCP Review staff report and recommendations*: "It is remarkable that these opportunistic birds have returned to this urban setting and have been able to re-establish successful nests in non-native, ornamental trees. The birds have re-established in these trees, not only because such trees are all that remains in the area . . ."

suggest that these species, as well as Great Blue Herons and Black-crowned Night-Herons, were unlikely to have nested in the local area during the decades immediately preceding the 1880s.

First, we consider it likely that, if colonial waterbirds were nesting in the Ballona/Venice area, or in other parts of the state, during the middle and late 1800s, older ornithologists/oologists (egg collectors) of that era would have known of nesting locations prior to the rise of plume-hunting, which they apparently did not (see Grinnell 1898, Willett 1912, Dawson 1915, and Grinnell and Wythe 1927).

Second, we note that the pre-Marina del Rey landscape was likely characterized by wide tidal channels and mudflats, salt marshes, coastal dunes, and pockets of freshwater and/or brackish marsh, and riparian scrub. No written accounts or photographs mention or show groves of tall trees within the wetlands (these riparian communities were present upstream, along upper Ballona Creek, in what is now part of Culver City, but no evidence of nesting herons/egrets exists for these upstream areas, either). Herons and egrets may establish nesting colonies on or near the ground, but generally this is limited to locations where humans and other predators cannot readily reach the birds or their nests; for example, Butler (1992) wrote that nest site selection for the Great Blue Heron is mainly driven by the distribution of foraging habitats, but is also "predator-driven; like most other herons, this species generally selects nest sites difficult for mammalian predators to reach, e.g., islands, trees in swamps, high branches, etc." As noted in Section 3.2.2, ranching of the local area goes back to at least 1839. Extensive freshwater reedbeds could have existed in the Ballona/Venice area before or during that era, out of the range of memory or knowledge of ornithologists of the late Nineteenth Century, and such areas could have supported certain colonial waders (e.g., Black-crowned Night-Heron, White-faced Ibis *Plegadis chihi*). Any such areas, if they existed at all, would have been largely lost by the late 1920s when Ballona Creek was channelized through the eastern Ballona Valley (see Cooper 2008).

Third, it is relevant that Grinnell (1898) termed the Great Blue Heron "common" and the Black-crowned Night-Heron "abundant" on the coast of Los Angeles County; yet the former bred only "sparingly" in the county, and not in the Ballona/Venice area, and the latter was not known to breed anywhere in the county. This was during the period when egrets had been nearly wiped out by plume traders, which suggests that herons had not been subjected to comparable hunting pressures at that time. This lack of nesting records for colonial waterbirds in the Ballona/Venice area as of 1898, despite Great Blue Herons and Black-crowned Night-Herons being present in large numbers, suggests that the local area lacked one or more required habitat features. Thus, even if egrets had still been present in good numbers, there is little reason to expect they would have been nesting in the local area.[6]

It is worth noting that, during the height of oology (egg-collecting) in the early 1900s, only a handful of tree-associated birds were collected or observed at the historical Ballona/Venice wetlands, although they were common at other coastal-slope sites in southern California (e.g., Bixby Slough near San Pedro). Most are species such as the Yellow-breasted Chat (*Icteria virens*), which are often associated with low, brushy vegetation and not necessarily groves of tall trees; there is little or no local mention of several riparian woodland species that were fairly abundant through most of the Los Angeles Basin historically, such as the Downy Woodpecker (*Picoides pubescens*). Not coincidentally, a similar situation persists today, where even common woodland species (such as most woodpeckers, Black-headed Grosbeak *Pheucticus melanocephalus*) are still rare in the Ballona Valley, even as they may be common in nearby Santa Monica and at inland sites (see Cooper 2006).

Aside from an intriguing account involving the White-faced Ibis (see below), now a rare transient through the area, historical (late 1800s/early 1900s) egg-collectors and ornithologists described wading birds at Ballona exclusively as rare transients, and no accounts mention nesting or over-summering. Even by the 1940s, prior to the development of Marina del Rey and several decades after the waning of the plume trade, large waders were still scarce and did not nest in the Ballona area (von Bloeker 1943). For example, by the early 1900s, only one nesting colony of the Snowy Egret was known in California, in Merced County (Dawson 1915). Today, dozens of colonies containing thousands of breeding pairs of the Snowy Egret are found the length of the state, consistent with their adaptation to urban and modified habitats rather than suggesting a decline because of them. Again, none of the oldest historical accounts written by ornithologists who would have remembered the birds' status before plume hunting, and the concomitant decline of egrets, mentioned widespread historical breeding, as is the case today, which suggests that the current era of heron and egret nesting success is without precedent in the recorded natural history of the region.

The only Los Angeles County nesting sites for herons and egrets known during the late 1800s and early 1900s consisted of a colony of Great Blue Herons at a site "north of Santa Monica" (in sycamores, per Grinnell 1898; listed by Froke [2007] as "Zuma Canyon," which is near Malibu, approximately 15 miles northwest of Santa Monica), and another "near Cerritos on the San Gabriel River" in 1895 (one nest, per Grinnell

[6] Population declines in herons were reported by authors starting in the early 1900s, but those declines were not attributed to the plume trade and seemed to occur even as egret populations were starting to rebound. Declines in heron populations during the first half of the 1900s are poorly understood, but may have been from such causes as shooting and the draining and channelization of wetlands.

1898). Willett (1933) confirmed that the Santa Monica Great Blue Heron colony had vanished some time around 1901, and added a record for the Black-crowned Night-Heron ("until about 1906 a small colony nested at Bixby [= Long Beach]")[7]. Cooper (2006) provided a summary of the known historical status of the Great Blue Heron in the Ballona Valley:

> This heron's historical breeding status is unknown, but it was only a transient and winter visitor by the 1920s (e.g., *Bird-Lore* 26:347), and breeding was not mentioned by von Bloeker (1943), who considered it "frequently observed in the meadow area and in the salt marsh," nor was it mentioned as a breeder on subsequent surveys (e.g., Dock and Schreiber 1981; Corey 1992).

Both Grinnell and Willett (among other authors and collectors) reported many nesting records of species *other than waders* from Venice, Ballona, Playa del Rey, Del Rey, and other local sites. The Western Foundation of Vertebrate Zoology in Camarillo, California, contains dozens of egg sets collected from this area during the late 1800s and early 1900s, including several of the elusive, and now locally-extirpated, Light-footed Clapper Rail (*Rallus longirostris levipes*) found in extensive saltmarsh and brackish wetlands. Thus if colonial waterbirds were present and nesting, we may reasonably infer that they would have been at least noted, if not collected.

To reiterate, our goal in this extensive historical research was not to prove one way or another whether colonial waterbirds did or did not nest at Ballona or elsewhere in the local area during the mid-1800s or earlier, prior to the keeping of ornithological records, nor did we use historical references for the purpose of determining what must be done to provide for the herons that have colonized the area in recent years. Our goal was to evaluate the evidence that is available, in order to base our management and conservation recommendations on the known historical record and on the most likely scenarios, as requested by several commenters during public hearings. In light of our findings, and considering the rarity of heron and egret colonies in the region even prior to 1900, we regard it as very unlikely that nesting colonies of herons and/or egrets were overlooked in the Ballona area. Rather, it is likely that these birds simply did not occur as breeders, at least during the 70+ years prior to the construction of Marina del Rey, and possibly for much longer.

Evidence suggests that, whereas coastal wetlands in Los Angeles County and southern California provided important habitat for large waders in the non-breeding seasons (during winter and migration periods), birds generally moved either inland, or farther up the coast into central California and beyond, during the spring and summer nesting

---

[7] In addition, Grinnell (op. cit.) also mentioned a second-hand report that the White-faced Ibis had been over-summering at the "Ballona Marshes" recently [= late 1800s] and that "it may breed here." This species is now rare in southern California away from the Imperial Valley in the extreme southeast.

season[8]. This is logical, given that the streams of central and northern California carry more water year-round, which in turn supports taller riparian vegetation, including sycamore and tall willow groves that extend down to the coast. The few coastal southern California sites known to have historically supported nesting herons and egrets were along the few major coastal streams with groves of large sycamores or other trees extending to the ocean (at the mouth of San Onofre Creek in northern San Diego County, for example) and not those with the extensive mudflats and salt marshes that existed on broad, flat coastal plains, habitats that were characteristic of the Los Angeles Basin, including the Ballona area.

As noted previously, similar situations persist today at several coastal estuarine sites in southern California (e.g., Mugu Lagoon, Alamitos Bay/Bolsa Chica) and northwestern Baja California, Mexico (e.g., Bahia de San Quintin, Bahia de Todos Santos). For example, Mugu Lagoon in southern Ventura County presents one of the best-preserved examples of coastal saltmarsh near Marina del Rey, (located within Pt. Mugu Naval Weapons Station) and supports an avifauna that is probably similar to that of the historical Ballona Wetlands, based on comparison of specimen records and historical sightings from both sites. It, too, is characterized by broad tidal channels through low saltmarsh, surrounded by a broad coastal plain (Oxnard Plain) with coastal sage scrub, and is separated from the sea by a low range of coastal dunes (see Figure 3–7).

Figure 3–7. Mugu Lagoon, showing a typical southern California dune, saltmarsh, and coastal scrub ecosystem. Oxnard Plain (not visible) is behind hill to the right. Photo published online at www.modernhiker.com.

[8] From many sources (e.g., Grinnell and Miller 1944), the main historical nesting sites for these birds in southern California appears to have been inland, at places like San Jacinto Lake, as well as in the southern San Joaquin Valley (e.g., Buena Vista Lake). Both these areas featured extensive reedbeds and have been well known to hunters and naturalists alike for more than a century.

Though Mugu Lagoon is fed by a coastal stream, Calleguas Creek, the combination of low summer flows, saline soil, and persistent coastal winds has likely prevented tall trees from developing, and this was probably the case at the historical Ballona Wetlands, as well. As at Marina del Rey, the main nesting area today for herons and egrets in the Pt. Mugu area is not at Mugu Lagoon, but within groves of planted trees, including non-native eucalyptus (*Eucalyptus* spp.), around nearby marinas and other coastal development. This is a recurring scenario up and down the coast in locations where native saltmarshes and other coastal wetlands occur near artificially landscaped marinas and other built environments.

Whereas a surge in the number and extent of nesting herons and egrets in southern California is relatively recent, the phenomenon of these birds nesting in non-native eucalyptus trees is not, suggesting that the birds are not "adapting" to this habitat, but rather using it to colonize new nesting areas. Froke (2007) listed several California heron nesting records from the early 1900s in eucalyptus groves, from a time (*circa* 1920s) when coastal wetlands were still very extensive, roads were mainly dirt, and the human population in the state was a fraction of that of today. During that time, as now, herons apparently took advantage of these tall trees as suitable nest sites and became breeding residents in areas where they had formerly been exclusively non-breeding residents or visitors.

Despite their exotic appearance and their unfamiliarity to the general public, by all accounts (see especially Unitt 2004), most nesting species of herons and egrets in coastal southern California are urban-tolerant animals that will quickly take advantage of novel habitats that meet their ecological requirements. Appendix C to this plan provides maps and photos of additional extant heronries on the coastal slope of Los Angeles County, demonstrating the propensity of these birds to select sites in heavily urbanized locations vegetated almost entirely with non-native arboreal landscaping. In the case of Great Blue Herons, vegetation need not be present, as this species will use various forms of man-made platforms in developed settings, such as cranes, lighting standards, and navigational warning structures in harbors (see, for example, Figures C–8 through C–11). We assert that, since at least the late 1800s, conditions in the Ballona/Marina del Rey area were not conducive to nesting by colonial herons or egrets until three factors converged:

> a) Trees planted at Marina del Rey in the 1960s reached sufficient height to support large, tree-nesting birds. We recognize that these species will nest upon the ground or on low bushes in protected situations, but this has not been the case for the Ballona/Marina del Rey area at any time since at least the mid- or late 1800s. Our review of the literature and the field notes of contemporary field ornithologists indicates that all nesting records for these species on the coastal slope of Los Angeles County have been in trees or on tall, man-made structures

such as light fixtures and cranes, with the vast majority of known nesting sites becoming active only in the past 10—15 years.

b) Regional population numbers of colonial-nesting heron and egret species became high enough in spring to allow individuals to find mates. This may have been the case for egrets before 1880, but nobody writing around the turn of the Twentieth Century recalled them having ever having nested in the region. As discussed previously, Grinnell (1898) regarded Great Blue Herons as "common" and Black-crowned Night-Herons as "abundant" on the coastal slope of Los Angeles County, yet neither species had been recorded nesting in the Venice Marshes. Furthermore, given that high heron populations during the late 1800s apparently did not lead to local nesting at that time, we see no strong argument that egrets probably *did* nest locally prior to 1880, after which hunting decimated their populations. That is, we consider it probable that other ecological factors also needed to be fulfilled locally before any of these species could successfully colonize the area.

c) Prey levels (including fish and possibly non-native rats and other food items) in the Marina del Rey/Ballona area became high or concentrated enough during the nesting season to support birds feeding young. Though data on prey levels do not exist, we are simply acknowledging the self-evident fact that colonies of predatory waterbirds require adequate prey levels in order to become established and to remain viable over time.

In summary, the putative scenario described previously (see the start of Section 3.2.3), in which herons and egrets maintained nesting colonies in the "pre-marina" Venice Marshes, or anywhere in the area, prior to the 1990s, and have now "returned" to use non-native trees as a substitute for lost habitats, cannot be disproved, but nor is this scenario supported by any form of available evidence. We do not believe that planting additional tall trees in Marina del Rey or the Ballona Wetlands would represent a necessary or appropriate step toward restoring historical conditions in the Marina del Rey/Ballona/Venice area. Rather, the recent and ongoing colonization of non-native landscaping trees at Marina del Rey by colonial waterbirds fits a wider pattern of these same species becoming newly established in non-native trees (or, in some cases, man-made structures), typically at urbanized locations along the coast, including several parts of Los Angeles County (see Cooper 2006; Table 3–1, Figure 3–8, and Appendix C in this plan). Since the natural-historical landscape in this area is likely to have lacked tall trees, and since we know that various species and natural communities that were historically present in the area have been displaced by human-adapted tree-dwelling species (Cooper 2008), we recommend against modifying what little natural habitat remains in the area in order to create still more tree nesting sites for colonial waterbirds that have been thriving in the area since the latter half of the 1990s.

3.2.4 THE FUTURE OF NESTING HERONS & EGRETS AT MARINA DEL REY

It has become clear that virtually all of the hundreds of medium and large landscape trees in Marina del Rey have potential to be colonized by nesting herons or egrets, so long as they retain enough structure to support a nest (Great Blue Herons and Double-crested Cormorants will nest even in leafless snags). The trees selected as nesting sites can and do change from year-to-year, or even within the same year. For example, several dozen Black-crowned Night-herons had nested in the eucalyptus row northeast of Oxford Basin for several years, but in 2009 only a few trees at the eastern end of the row were used, though the others showed no sign of disturbance. No one can say whether or when large numbers might return to use this site, or whether the birds breeding elsewhere along Admiralty Way (including at Yvonne B. Burke Park) may choose to move to yet another part of Marina del Rey, such as Burton Chace Park (where a modest Black-crowned Night-Heron colony was abandoned in 2010, apparently due to predation by a single Raccoon *Procyon lotor*; see Appendix G). The propensity of colonial waterbirds to engage in such shifts from year to year must be taken into account in any strategy developed for the purpose of managing their local breeding populations.

Planting new trees may even be detrimental to the recovery of the lost natural community at Marina del Rey and the Ballona Wetlands; in a recent review of bird species known to have been lost from the Ballona Wetlands since the early 1900s and still not recovered, Cooper (2006) found that nearly all extirpated species required either grassland, saltmarsh, or dune habitats[9]. Few tolerate even tall scrub habitat, much less wooded areas or stands of tall trees. In short, the bird species that depend on critically threatened coastal wetland systems in southern California and adjacent Baja California, Mexico, have adapted over millennia to large, open wetland systems that lack tall trees, and to low prairies, coastal dunes, and coastal scrub habitats. These species do not respond positively to trees, and in fact many are driven out of areas when trees are planted.

Cooper (2006) also found that birds colonizing the Ballona area in recent years include several woodland-adapted species, including those that nest in built structures, such as freeway overpasses with holes that resemble tree cavities, as well as colonial herons and egrets (and now cormorants) that nest in tall trees. This group of new colonists now thrives in the Marina del Rey/Ballona area as a result of major, purposeful changes to the natural landscape that humans have made over a period of decades. Heartening as it is to see certain native species thriving in a human-dominated landscape, it can mask

---

[9] A large group of species that require freshwater marsh has been effectively re-established locally with the creation of a single habitat feature, the Ballona Freshwater Marsh, in 2003 (Cooper 2008, D. S. Cooper, unpubl. data).

the fact that those species adapted to the natural, treeless landscape that are now in greatest need of protection and habitat restoration are being precluded from occurring. The restoration of these extirpated species would not be possible under a conservation approach that emphasizes a perceived need to protect non-native landscape trees (or a need to plant trees) for the benefit of species that show no sign of needing extra help to become successfully established—and that are actually increasing in number—in the local area and wider region.

3.3 Marina del Rey Heronries and Regional Context

Colonial waterbirds that previously did not nest on the coastal slope of southern California, or that did so only very locally or rarely, have become much more widespread in the past two decades. It would be beyond the scope of this plan to list every nesting colony of herons, egrets, and/or cormorants in the entire region, but we provide a reasonably complete summary for the coastal slope of Los Angeles County. Table 3–1, below, lists the waterbird nesting colonies in the county that are known to us, from south to north; the subsequent Figure 3–8 shows their locations.

TABLE 3–1: NESTING SUMMARY FOR COLONIAL HERONS, EGRETS, AND CORMORANTS ON THE COASTAL SLOPE OF LOS ANGELES COUNTY, EXCLUDING MARINA DEL REY

Species	Pairs (approx.)	Location	Year/Citation
Great Blue Heron	14	Naples/Alamitos Bay, Long Beach	2009/RAH pers. obs.
	3	Port of Long Beach/Navy Mole	2009/RAH pers. obs.
	5	Port of Los Angeles/Pier 400	2009/RAH pers. obs.
	2	Port of Los Angeles/Signal Street	2009/RAH pers. obs.
	9	Pico Rivera/San Gabriel River Spreading grounds	2009/L. Schmahl, via email
	10	Sepulveda Basin/Encino G.C.	2009/DSC pers. obs.
	4	Los Angeles/Echo Park Reservoir	2009/J. Raskin, via email
	35	Legg Lake	2009/DSC, pers. obs.
	3	Cogswell Res. (San Gabriel Mtns.)	2009/M. San Miguel
Great Egret	10[10]	Malibu Country Mart Parking Lot (adj. to Malibu Lagoon)	2009/m. obs.
Snowy Egret	55	Belmont Shore/Ocean Blvd.	2009/RAH pers. obs.

[10] Possibly many more nests, including different species, just north of parking lot site at Malibu. An apparently large colony of Great Egrets at Legg Lake in South El Monte observed on Google Maps aerial image but not confirmed in field (DSC pers. obs.).

Species	Pairs (approx.)	Location	Year/Citation
Black-crowned Night-Heron[11]	1	Alamitos Bay	2009/RAH pers. obs.
	55	Belmont Shore/Ocean Blvd.	2009/RAH pers. obs.
	35	Shoreline Drive, Long Beach	2009/RAH pers. obs.
	22	Queen Mary, Long Beach	2009/RAH pers. obs.
	20	Terminal Island/Customhouse	2009/RAH pers. obs.
	10	Sepulveda Basin/Encino G.C.	2009/DSC, pers. obs.
Double-crested Cormorant	89	vic. Heim Bridge, Terminal Island	2008/K. Keane pers. comm.
	20	Sepulveda Basin Wildlife Area	2009/DSC, pers. obs.
	15	Legg Lake	2009/DSC, pers. obs.

Most of these colonies have become established within the past 10 years or so (K. L. Garrett, Los Angeles County Breeding Bird Atlas, unpubl. data), following a similar pattern of recent expansion in San Diego County (Unitt 2004) and Orange County (RAH pers. obs.). Additional colonies undoubtedly exist in Los Angeles County, particularly on golf courses and around reservoirs that are off-limits to the general public. Please see also Appendix C, which provides more detailed maps of nesting and roosting areas, as well as photos of some of these locations.

[11] Possibly also nests at Malibu Country Mart, in a grove of tall eucalyptus north of the parking lot, based on whitewash and juveniles in the area in fall, 2009 (DSC per obs.).

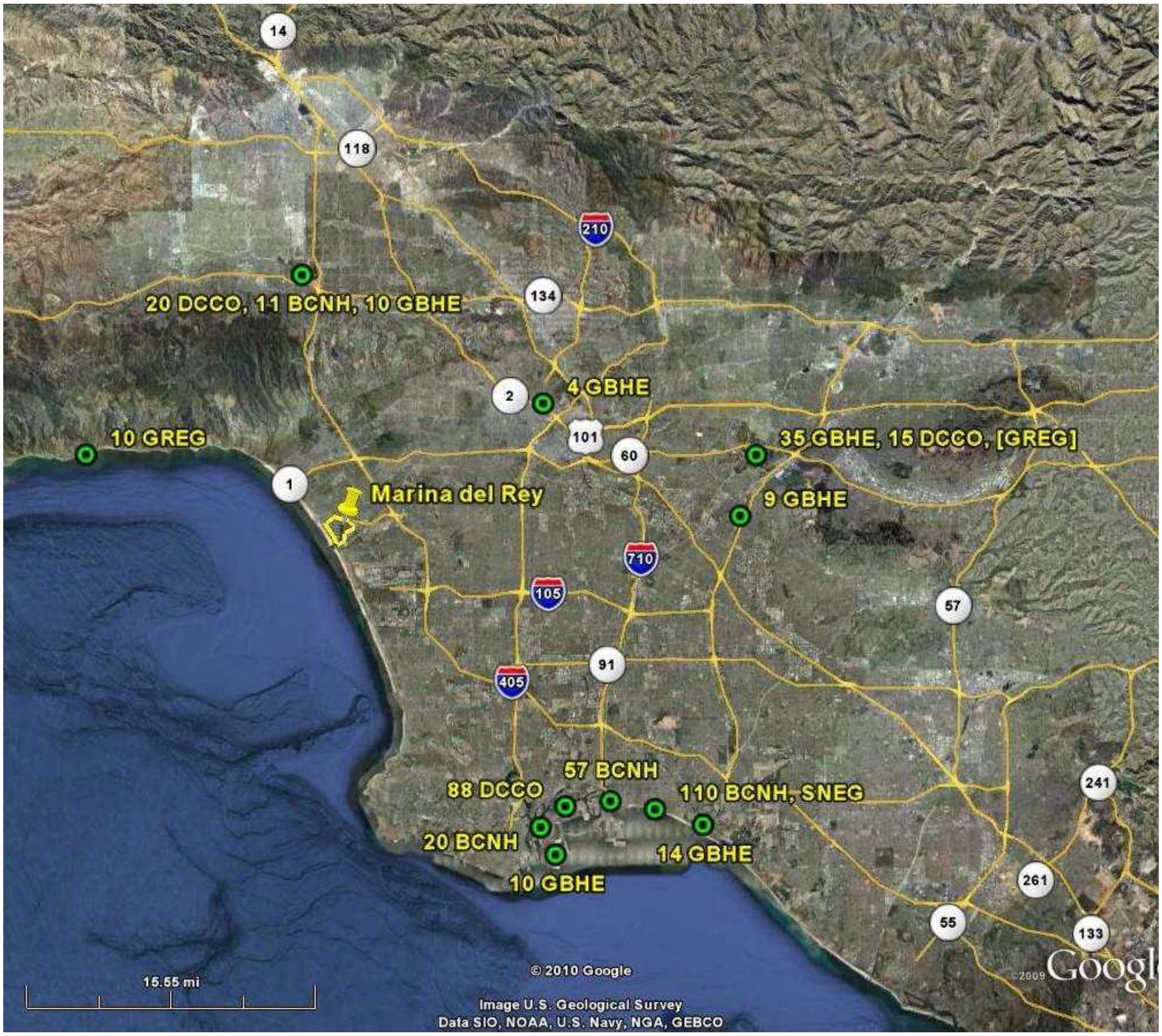


Figure 3–8. Locations and approximate numbers of pairs at known nesting colonies of Double-crested Cormorants (DCCO), Great Blue Herons (GBHE), Great Egrets (GREG), Snowy Egrets (SNEG), and Black-crowned Night-Herons (BCNH) on the coastal slope of Los Angeles County in 2009. Please refer to Appendix C, which provides more details on these colonies, including recent photos.

3.4 Waterbird Nesting Colonies in Marina del Rey

Five main waterbird nesting colonies in Marina del Rey were active in 2009 (Figure 3–9), at Admiralty Way, Marquesas Way, Mariner's Village, in the vicinity of the fuel-bait dock at the end of Bora Bora Way, and Villa Venetia; these colonies are summarized in Table 3–2 and described on the following pages. It should be mentioned that Burton Chace Park, located on the east side of the marina, contains many mature trees, some of which were used for nesting in 2009 (we saw one Black-crowned Night-Heron fledgling, a Green Heron *Butorides virescens* at a nest, and a possible Snowy Egret nest), and herons and egrets undoubtedly roost in the park, to some degree. We also noted several recently-active (based on whitewash on the ground) nests in ficus trees (*Ficus* spp.) at Del Rey Lagoon Park south of Marina del Rey, just north of the parking lot along the west side of the lagoon. We saw no evidence that either Burton Chace or Del Rey Lagoon parks were among the local area's main nesting colonies in 2009, but this could change in the future.

Figure 3–9. Map of Marina del Rey showing the five main waterbird colonies in red. BCNH = Black-crowned Night-Heron; DCCO = Double-crested Cormorant; GBHE = Great Blue Heron; GREG = Great Egret; SNEG = Snowy Egret. The fence around the California Least Tern nesting colony on Venice Beach is shown in green.

Table 3–2, below, provides summary information on the waterbird colonies that we studied in Marina del Rey during 2009.

TABLE 3–2: NESTING SUMMARY FOR COLONIAL HERONS, EGRETS, AND CORMORANTS IN MARINA DEL REY, 2009

Species	Pairs (approx.)	Nesting Substrate	Main Nesting Locations
Great Blue Heron	33	palms, pines, eucalyptus	Bora Bora Way, Mariner's Village, Villa Venetia
Great Egret	5	eucalyptus, pines	Admiralty Way, Bora Bora Way
Snowy Egret	35	ficus, eucalyptus, coral tree	Admiralty Way
Black-crowned Night-Heron	45	eucalyptus, ficus, melaleuca, coral tree	Admiralty Way, Marquesas Way
Double-crested Cormorant	19	cypress snags	Villa Venetia

3.4.1 ADMIRALTY WAY NESTING COLONY

In 2009 we found approximately 69 nests of Snowy Egrets and Black-crowned Night-Herons—divided approximately equally between these two species—in eucalyptus, Indian laurel (*Ficus microcarpa*), and coral trees (*Erythrina* sp.) located on both sides of Admiralty Way, generally between Oxford Basin to the west and Yvonne B. Burke Park to the east. The night-herons tend to nest earlier in the season than the egrets, and by the time we started surveying most of the herons had fledged whereas the egrets were still in the middle of nesting. The 12 "old nests" located in eucalyptus trees just north of Oxford Basin did not appear to have been active in 2009 (e.g., no whitewash on bike path below). Also in this area were two nests of the Great Egret.

Figure 3–10. Locations of approximately 69 nests of Snowy Egrets Black-crowned Night-Herons along Admiralty Way that were active in 2009. More than half of the nests (approximately 38) were in two large landscape trees (eucalyptus and Indian laurel) in a parking lot near the eastern end of the colony; see Figure 3–11. The eastern end of Oxford Basin is visible in the upper left corner of this aerial image.

Figure 3–11. Photo taken on 14 July 2009 showing the two main nesting trees along Admiralty Way—a eucalyptus on the left containing ~15 nests, including that of a Great Egret (adult egret visible, flying in from left) and an Indian laurel on the right containing ~23 nests (with Snowy Egrets visible in the canopy). This and other photos in this plan showing current conditions were taken by RAH in 2009, unless otherwise noted.

Figure 3–12. Juvenile Black-crowned Night-Heron photographed in the Indian laurel tree shown above on 23 June 2009. This bird was probably just barely capable of flight at the time of this photo. This appears to have been one of the later Black-crowneds to have fledged in the area in 2009.

Figure 3–13. Photo taken on 23 June 2009 showing an adult Snowy Egret feeding a nearly-grown nestling in the Indian laurel shown in Figure 3–11.

Figures 3–14, 3–15. This juvenile Black-crowned Night-Heron, photographed in the median of Admiralty Way on 20 May 2009, did not appear to be disturbed by the photographer or by traffic passing below. Whitewash on the limbs suggests that this tree was used by herons with some regularity in 2009.

3.4.2 MARQUESAS WAY NESTING COLONY

In 2009 we documented nine Black-crowned Night-Heron nests in melaleuca trees (*Melaleuca* sp.) along the median of Marquesas Way (Figure 3–16). We regularly observed adult night-herons roosting in these trees and in sycamore/plane trees (*Platanus* sp.) that also line the road. Four large coral trees at the eastern end of this street have considerable amounts of guano beneath them, indicating that roosting birds regularly use those trees as well, and may eventually initiate nesting in them.

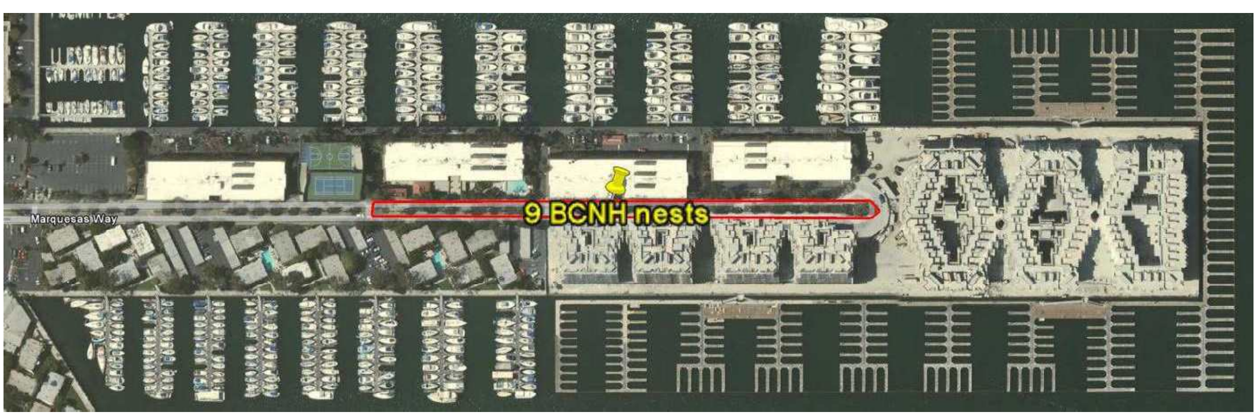


Figure 3–16. Locations of nine nests of Black-crowned Night-Herons (BCNH) along the median strip of Marquesas Way that were active in 2009.

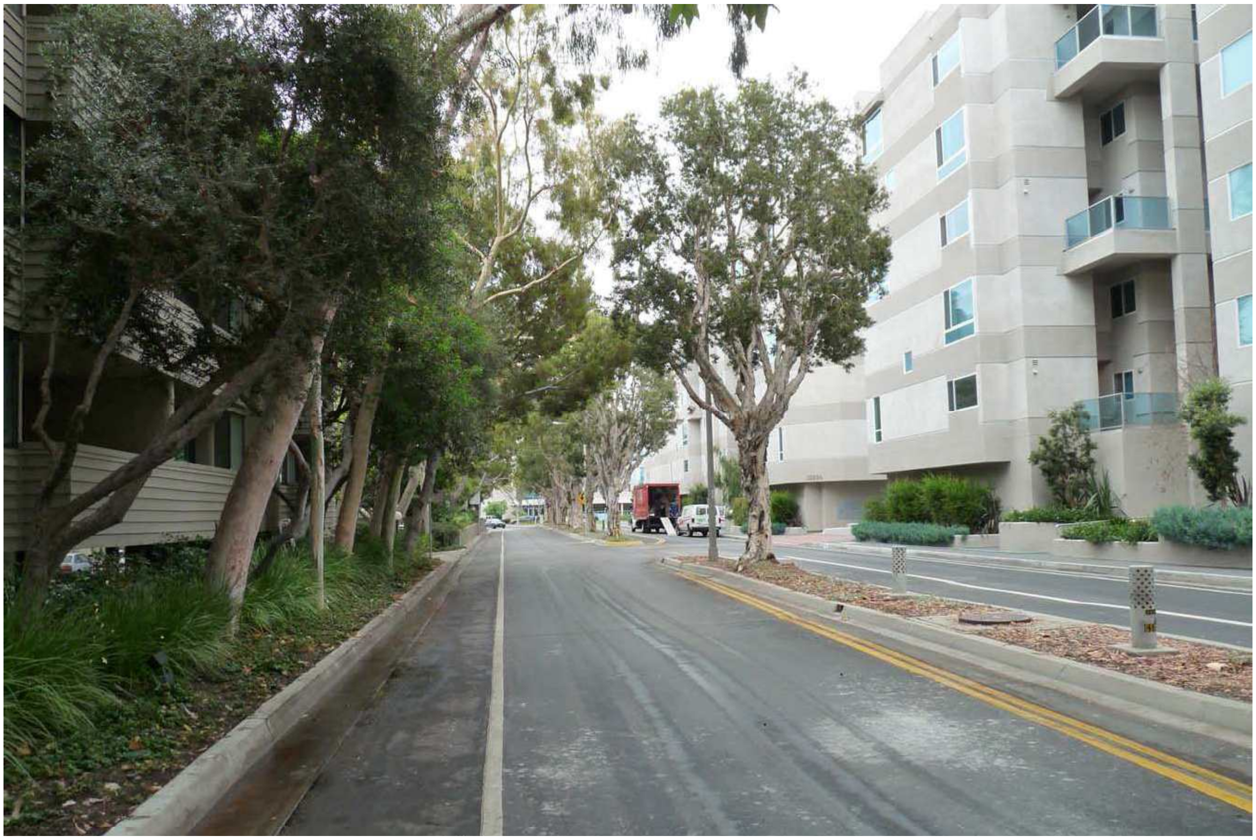


Figure 3–17. Photo taken on 30 July 2009 showing the nesting and roosting trees along Marquesas Way.

Figure 3–18. Photo taken on 22 June 2009 of an adult Black-crowned Night-Heron roosting in a sycamore/plane tree on the shoulder of Marquesas Way.

3.4.3 Nesting Colony Near Fuel-Bait Dock on Bora Bora Way

In recent years Great Blue Herons and Great Egrets have colonized the southwestern portion of Marina del Rey, taking advantage of large eucalyptus and pine trees, as well as a bait tank that provides a source of supplemental food for many birds.

Figure 3–19. Great Blue Herons (GBHE) and Great Egrets (GREG) nest in pine and eucalyptus trees at the end of Bora Bora Way, near the fuel-bait dock shown above. At least two nests of the Great Egret were confirmed at this location, and it is possible that one or more of the 12 other large nests that were empty at the time of our surveys could have been built by this species. The default assumption, however, is that most or all of these nests were of the more numerous Great Blue Heron.

Figure 3–20. Photo taken on 20 May 2009 showing a Great Egret nesting in the top of a large pine (*Pinus sp.*) close to the fuel and bait dock.

Figure 3–21. Photo taken on 22 June 2009 showing a concentration of eight Great Blue Heron nests at the top of eucalyptus trees a short distance south of the fuel-bait dock.

Figure 3–22. When this juvenile Black-crowned Night-Heron, foraging at the bait tank on 30 July 2009, lost a baitfish it had caught, the bird dove into the water in an unsuccessful attempt to recapture the fish.

3.4.4 MARINER'S VILLAGE NESTING COLONY

Great Blue Herons, and possibly some Great Egrets, have colonized a small grove of pines at the Mariner's Village apartment complex in the southwestern part of Marina del Rey.

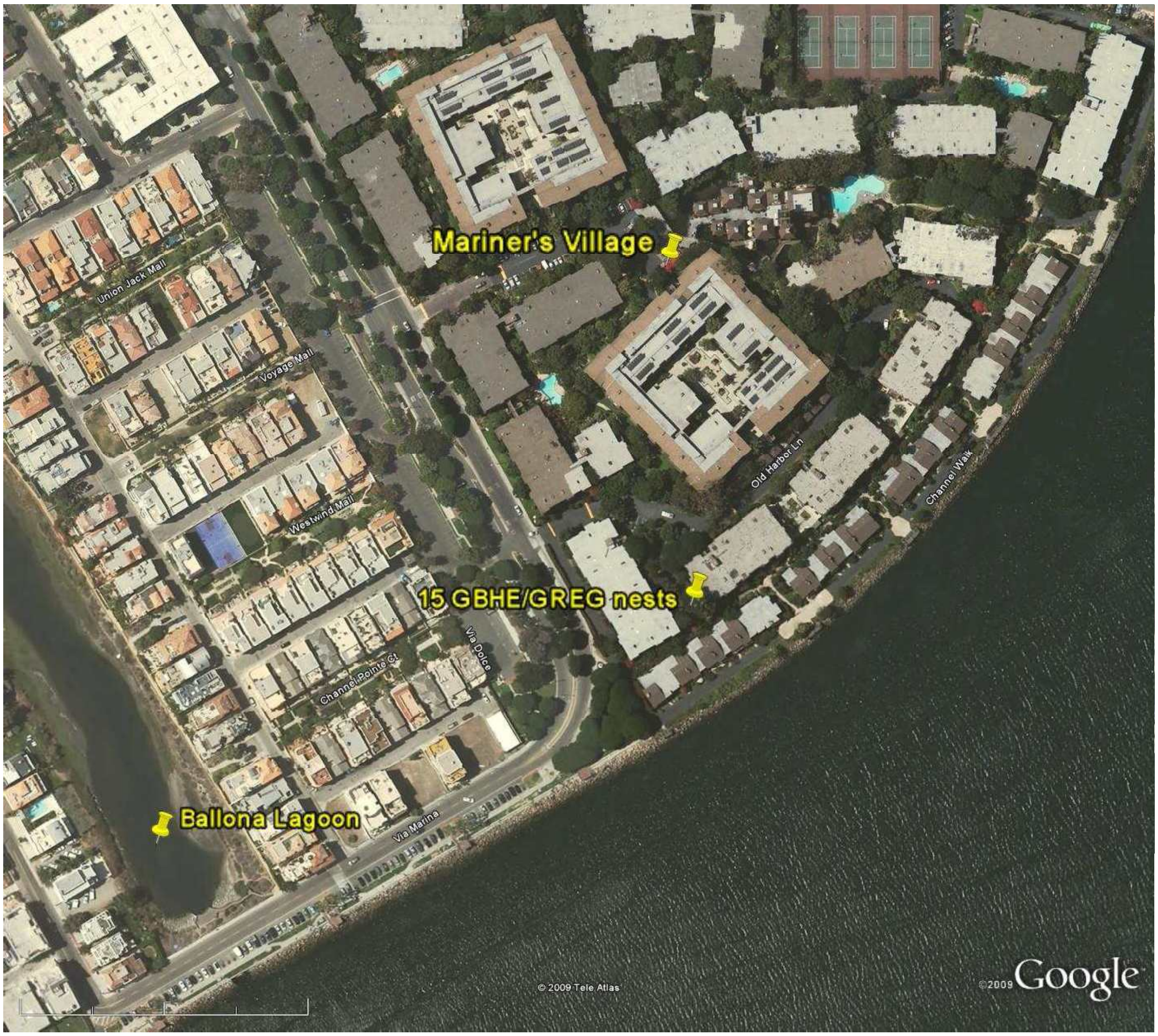


Figure 3–23. Great Blue Herons (GBHE), and possibly some Great Egrets (GREG), nested in pines at the Mariner's Village complex in 2009. As noted previously, the default assumption is that most or all of the 15 large nests in these trees were made by Great Blue Herons, the only species of colonial waterbird we saw in these trees during our surveys.

3.4.5 Villa Venetia Nesting Colony/Area A Roosting & Foraging Site

In 2009, Great Blue Herons nested in various trees around the Villa Venetia grounds. One of the three Monterey cypress (*Cupressus macrocarpa*) trees that have been used by nesting Great Blue Herons in recent years fell over in 2008, leaving two severely stressed (and nearly leafless) trees that were largely taken over Double-crested Cormorants in 2009.

Area A of the Ballona Wetlands is located east of Villa Venetia and north of the Ballona Creek channel (see Figure 3–24, below). We observed roosting Great Blue Herons in this area, both on the ground and in tall eucalyptus trees along the east side of Fiji Way (slightly north of the area shown below). This area appears to be important for roosting and foraging Great Blue Herons, particularly adults; we recorded as many as 12 of these birds there during our surveys. It is closed to normal public access by a high chain-link fence, which may allow herons to roost here unmolested.

Figure 3–24. Locations of 19 nests of the Double-crested Cormorant (DCCO) and six nests of the Great Blue Heron (GBHE) that were active in the Villa Venetia area in 2009. The count of 19 cormorant nests was made by Jeff Froke (2009) and represents the total number of active nests he observed by following nesting activity from March through September.

Figure 3–25. Photo taken on 22 June 2009 showing the two remaining Monterey cypress trees with numerous Double-crested Cormorants in the canopies. The trees are white with guano and are nearly dead. Villa Venetia is on the right in this view and the Coast Guard Station is on the left.

Figure 3–26. Photograph taken on 23 June 2009 showing Double-crested Cormorants at several nests in the cypress trees near Villa Venetia.

Figure 3–27. Photo taken on 20 May 2009 showing the car assigned to park at space #7 at Villa Venetia.

Figure 3–28. Photo taken on 20 May 2009 showing an adult Great Blue Heron at a nest in a fan palm (*Washingtonia filifera*) between Villa Venetia and the UCLA Rowing Center.

Figure 3–29. Photo taken on 30 July 2009 showing a group of adult Great Blue Herons roosting/foraging in highway iceplant (*Carpobrotus edulis*) in Area A.

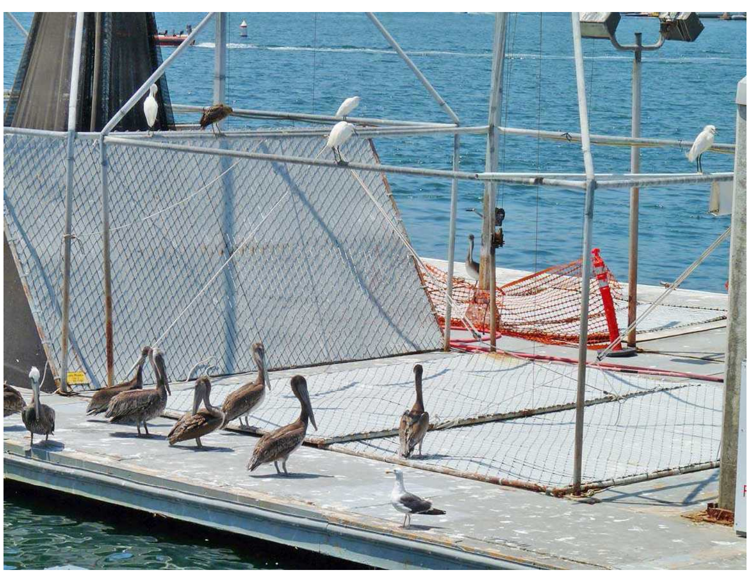


Figure 3–30. Photo taken on 30 July 2009 showing four adult Snowy Egrets, a juvenile Black-crowned Night-Heron, several California Brown Pelicans (*Pelecanus occidentalis californicus*), and a Western Gull (*Larus occidentalis*) loitering at one of the bait tanks that service the sportfishing boats at Fisherman's Village, a short distance north of Villa Venetia.

3.5 Waterbird Foraging & Roosting Locations in the Local Area

The main foraging and roosting areas for colonial waterbirds within Marina del Rey proper were at Oxford Basin and at the docks and trees around bait tanks located at the end of Bora Bora Way (see Figure 3–19) and Fisherman's Village (see Figure 3–30). Away from Marina del Rey proper, our 2009 surveys found that most locally-nesting colonial waterbirds forage and roost at Del Rey Lagoon, the Ballona Wetlands, Ballona Freshwater Marsh, and at the juncture of the Centinela Channel and Ballona Creek (the "Centinela Confluence") during the breeding season. Figure 3–9 provides a map of these locations; our observations at each site are summarized in the following discussions.

3.5.1 Oxford Basin

Located adjacent to the large nesting colony along Admiralty Way, Oxford Basin lies near the northern edge of the historical Ballona/Venice marshes (based on review of historical photos). Today's basin was apparently constructed out of a natural tidal basin in 1962 as Marina del Rey was built out. Fed by storm drains and influenced by tides through an automatic tide gate at the west end (estimated to have a tidal range of five feet in 1976), the basin was designed to "receive storm runoff at such times as the state of the tide within the harbor precluded its discharge causing inundation of low-lying lands adjacent to the north section of the harbor" (County of Los Angeles 1976:2). Oxford Basin was designated as a "Bird Conservation Area" by the County of Los Angeles in January 1963, as requested of the Board of Supervisors by "various naturalist organizations" (County of Los Angeles, op. cit.). In June 1973, the Board of Supervisors adopted an agreement providing for the LACFCD to assume the responsibility for the operation and maintenance of Oxford Basin as a flood control facility. It was subsequently landscaped extensively with non-native trees and shrubs, especially small-flowered myoporum (*Myoporum laetum*), a practice now recognized as being contrary to sound ecological principals. The myoporum landscaping is now in poor health, presumably due to an infestation of the myoporum thrip (*Klambothrips myopori*), which is taking a heavy toll on this plant across the region.

Oxford Basin supported the highest numbers of foraging and roosting Great Egrets, Snowy Egrets and Black-crowned Night-Herons of any site in our 2009 study, and this area was particularly important for young of these species, with up to 16 juvenile Snowy Egrets recorded on each visit; the next highest counts of juvenile Snowy Egrets were of 3 birds per site, made at Ballona Wetlands (Area B) and the Ballona Freshwater Marsh. In addition, no other site saw such high usage by large waders during afternoon (high tide) visits. Young Black-crowned Night-Herons were similarly common here, with an average of 5.8/visit during afternoon visits (adults were scarce everywhere, since they primarily forage at night). For Great Egret, Oxford Basin was the only site averaging more than 1 bird per visit, and young Great Egrets were nearly unrecorded at

ADK&A

Allan D. Kotin & Associates
Real Estate Consulting for Public Private Joint Ventures
949 S. Hope Street, Suite 200, Los Angeles, CA 90015

310.820.0900
213.623.3841
Fax 213.623.4231

akotin@adkotin.com

MARINA DEL REY

SLIP PRICING AND VACANCY STUDY

Prepared For

Los Angeles County

Department of Beaches and Harbors

March, 2009

ADK&A

Allan D. Kotin & Associates
Real Estate Consulting for Public Private Joint Ventures
949 S. Hope Street, Suite 200, Los Angeles, CA 90015

310.820.0900
213.623.3841
Fax 213.623.4231

akotin@adkotin.com

TABLE OF CONTENTS

EXHIBITS

APPENDICES

INTRODUCTION

At your request and with your prior authorization, Allan D. Kotin & Associates (ADK&A) has undertaken to update and expand the surveys of marina slip rates and marina vacancies contained in two prior reports published by Williams Kuebelbeck Associates, one in the year 2001 and the other in the year 2004. This updating was undertaken in parallel with a similar updating effort undertaken by Noble Consultants Inc., dealing with the changing trends in slip sizes in Marina del Rey and other Southern California marinas. *

Purpose and Background

The major focus of both surveys has been to identify and quantify the tendency for Southern California marinas, including Marina del Rey marinas, to redevelop in a pattern which results in fewer smaller wet slips under 35 feet and more larger slips above 35 feet. Marina del Rey presently has 69.8% of these smaller slips, which will be reduced to 58.7% should all the currently proposed redevelopment plans be approved and built.

The County Department of Beaches and Harbors (DBH) has sought independent external documentation of this trend in two interacting but separate efforts. The slip size study by Noble Consultants Inc. considers the long term patterns in slip size in Marina del Rey and elsewhere, focusing almost exclusively on the change in slip size distribution.

The parallel effort by ADK&A has been to examine the extent to which these changes in trends are manifested by observed market behavior. This behavior is measured in two ways. One is the pricing differential between small and large slips and the other is the vacancy differential. The goal of this study is to determine whether smaller slips are still widely available in Marina del Rey and whether the reduced supply has caused rents on smaller slips to escalate faster than rents on larger slips, making Marina del Rey smaller slips less affordable.

Key Findings of the Noble Consultants Report

As noted above, the County commissioned in parallel a study of changing slip lengths from Noble Consultants Inc. This study concluded that both within the California marina market generally and within Marina del Rey specifically, the average slip length was lengthening, the total number of slips within the same marinas was declining, and there was generally rapid increase in percentage terms in the number of larger slips. More specifically, Noble Consultants notes in their report that the "average slip length for all marinas within Marina del Rey increased from 32.5 feet to 33.9 feet between 1999 and 2008 and increased it to 36.5 feet when including the new proposed marina configurations. The number of slips decreased from 5,223 in 1999 to 4,731 in 2008 and to 4,251 when including the new proposed marina reconfigurations. However, this decrease in wet slips is

* A draft of this report was circulated on March 24, 2009. In response to comments made on the draft, only minor typographical corrections and a single numeric change were made in the document. Comments expressing disagreement with judgments in the document or dissatisfaction with related county policies are addressed in the Addendum, Appendix D.

offset by a comparable increase in proposed dry storages for smaller boats.

The change in mix by slip length in Marina Del Rey is shown in Exhibit 1 below. This table was created based on extrapolated data provided in the Noble Consultants Report.

Exhibit 1: Marina Del Rey Slip Distribution 1999 vs. 2008

	12' - 25'	26' - 35'	36'-50'	50' +	Total
1999 Slip Count	1,562	2,414	1,051	196	5,223
% of Total	29.9%	46.2%	20.1%	3.8%	100.0%
2008 Slip Count	1,231	2,074	1,146	280	4,731
% of Total	26.0%	43.8%	24.2%	5.9%	100.0%

As shown above, for the period 1999 to 2008 slip sizes under 35 feet have experienced a decline, slip sizes 36 to 50 feet have increased by 95 slips and slip sizes 50 feet or longer have increased by a total of 85 slips. However, smaller size slips still constitute 69.8% of all the wet slips available in Marina del Rey.

Elsewhere in his report, the author of the Noble Consultants report also reaches similar conclusions with respect to changing size distributions in other California marinas. In short, the extensive data assembled and analyzed by Noble Consultants confirms the core hypothesis that the distribution of slip lengths in marinas is changing in response to industry trends to favor a greater number of large slips and a smaller number of small slips in wet storage. A somewhat reversal trend is noted with respect to the still modest but increasing use of dry stack storage. Noble also points out that even if all the new reconfigurations are taken into account that the average slip length for all Marina del Rey berths is less than the average of other comparable marinas studied in the report.

Methodology, Authorship and Limitations

This entire study was conducted under the direct supervision of Allan D. Kotin, Principal of Allan D. Kotin & Associates. The updated field survey was performed by Barbara Bradfield, and the data analysis and tables were provided by Nick Vanderboom.

In general, ADK&A has relied on information assembled by and provided by LA County DBH. This information and some additional information on amenities and current vacancies were obtained through the use of a telephone and email survey with some personal follow-up by Barbara Bradfield.*

Organization of Report

* While ADK&A believes that the information provided herein is accurate, there has been no extensive effort to verify the information on site. Instead, we have relied upon the information provided by DBH and similar more recent information provided by phone, email and fax from the harbor masters and marina managers interviewed by Barbara Bradfield.

The balance of this report is organized into six sections, the first of which is an executive summary. This is followed by a discussion of Marina del Rey pricing trends and then by discussion of pricing trends in other selected Southern California marinas. A fourth section deals with vacancy trends in Marina del Rey while a fifth section deals with amenity patterns. There is a brief discussion of the apparent impact of the current recession in the final section.

In addition, there are a total of three appendices. Since each marina was analyzed separately with respect to the change in rates by slip size over time and a graph and table was prepared for each, incorporation of all the data used to create this report into the report itself would make it cumbersome and unreadable. For this reason, three appendices have been created each of which provides both summary data and the individual marina analysis.

The total list of appendices is as follows:

1. Appendix A – Slip Pricing in Marina del Rey.

2. Appendix B – Slip Pricing in Other Southern California Marinas.

3. Appendix C – Vacancy Trends in Marina del Rey Marinas.

Appendix A includes an attempt by ADK&A (p. A-9) to generate a rough estimate of the total potential revenue if all slips were charged at current asking rates and then to compare this "gross potential revenue" to the revenue reported in the gross receipts reports that are provided to DBH by the lessees operating the various marinas in Marina del Rey.

EXECUTIVE SUMMARY

Throughout Marina del Rey and other Southern California marinas, the rate of price increase in slips larger than 35 feet and particularly in slips greater than 50 feet has been much greater than the average and greater than the rate of increase in smaller slips.

Marina del Rey prices themselves are in fact largely at the midpoint level of the competitive set of marinas surveyed.

While there is some premium attached to newly constructed marinas, this premium is less than the premium associated with increasing size.

Within Marina del Rey, the pattern of price increase between those marinas operated independently and just for marina income is slightly less dramatic than the rates charged in those marinas that are adjacent to and related to other uses, e.g. hotels, fuel docks, repair yards etc. Not surprisingly, vacancy trends show generally lower rate growth and higher occupancy in the independently operated marinas than in the marinas operated adjacent to and in connection with other uses.

There seems to be somewhat greater volatility and higher vacancy among smaller slips which again reinforces the strong demand for larger slip sizes.

Independently priced smaller slips seem to be trending towards lower vacancy over time while adjacency affected slips vacancy is trending up.

Growth in rent in Marina del Rey seems to be generally consistent with pricing trends at other Southern California marinas for all slip sizes with some minor variations. To the extent that there is any significant difference, it is that larger slips are somewhat more expensive than the average of other Southern California slips although well below the peak of other Southern California marinas.

Both vacancy and pricing data tend to suggest that the progressive shift in the composition of marinas away from smaller slips to larger slips should, if not too extreme, not produce significant shortages and should produce more balanced pricing.

Vacancies are somewhat seasonal in all marinas with the lowest vacancies in the summer and higher vacancies in winter when small boat owners take their boats out of the water and some large boat owners relocate to locations with balmier climates.

Core amenities such as restrooms, showers, and dockside boxes are virtually universal while more modern technology features, e.g. TV and internet hookups, tend to be found in newer marinas. Lounges and pools are typically found in only a few very upscale marinas.

Comparison of calculated potential total revenue, i.e. all slips occupied at current asking (new tenant) rents, are consistently higher than actual gross revenues suggesting that many if not most long time tenants in marinas are paying less than slip rents quoted to new tenants.

MARINA PRICING TRENDS

Categorization of Marinas

Within Marina del Rey there are a total of 20 different marinas for which pricing data was available. Of this total, 11 are operated independently, that is to say they are marinas in which the slip prices represent essentially the only or primary source of revenue to the lessees from their waterside facilities. Of these 11 marinas, 9 have not been rebuilt for at least 20 years. There are in addition eight marinas operated in conjunction with hotels, boat sales, apartment-condominium complexes or yacht clubs. In each of these, there is reason to believe that revenue maximization from slip operations may not be the driving force behind all pricing decisions. For example, it may be important in most of these to maintain some level of vacancy to accommodate customers for other uses.

Finally, there is one marina that has been recently completely rebuilt, has just reopened and accordingly is kept separate from the analysis because there is no pricing trend data for it.

A complete list of these marinas and their categorization may be found on page A1 of Appendix A.

Overall Trends by Slip Size

As shown in the text table below, the 2,442 slips in the independently operated marinas in Marina del Rey are divided into four size categories. In terms of total inventory, the largest size category is 26 to 35 feet with about 26% of the total inventory and just under 1,100 slips. The smallest slips (12 to 25 feet) and the larger medium size slips (36 to 50 feet) are both about 600 units each and there are just under 150 slips of 50 feet or longer.

As shown in Exhibit 2 below, between 2003 and 2009, slip rates for the large slips rose from $20.39 to $29.32, a 43.8% increase. This compares to a much smaller dollar increase from $9.79 to $10.80 for slips under 25 feet over the same period.

It is also important to note that during the period slip rates for the smaller sizes have increased and then decreased, while for the most part there was a pattern of generally continuous increase or flat periods in the larger slips. This recent decrease in smaller slip size pricing appears to be a reflection of increasing vacancy rates in these slips. Review of the vacancy data validates this trend. Furthermore, two marina operators that control many of the smaller slips in Marina del Rey said that due to a lot of vacancies in late 2008, they lowered the rates for smaller slips. The annual rate of change in pricing for large slips has been 7.3%, the smaller slips at only 1.7% and the overall rate has been 5%.

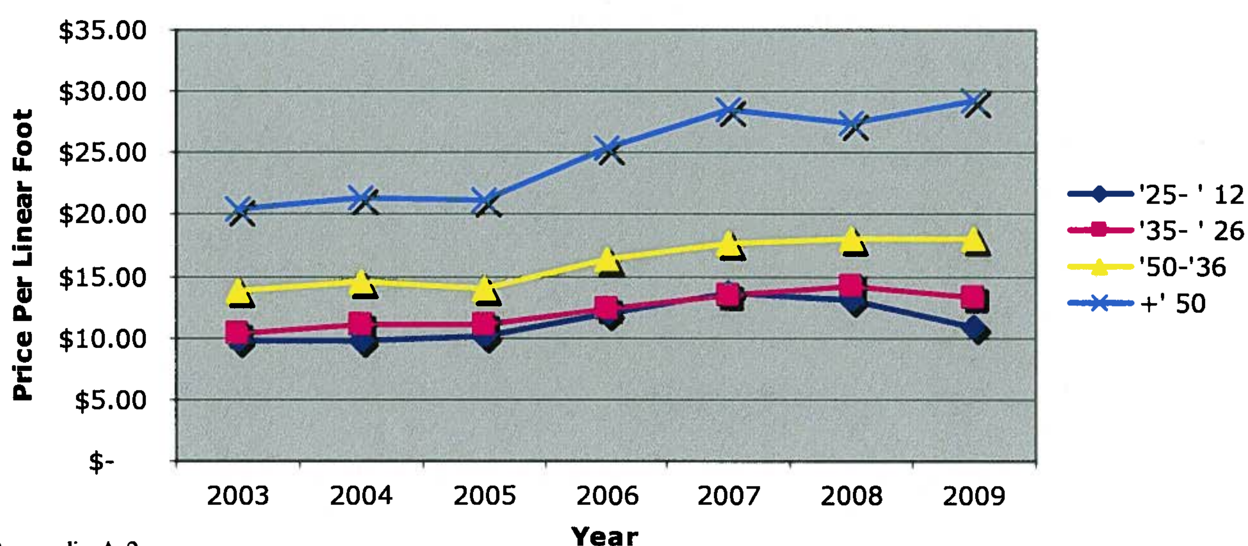
Exhibit 2: Marina Del Rey Independently Priced Slips – Weighted Average Pricing Trends

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	612	1,088	593	149	2,442
Assumed Midpoint (LF)	20.0	30.0	42.5	55.0	32.1
Year	**12' - 25'**	**26' - 35'**	**36'-50'**	**50' +**	**Total**
2003	$ 9.79	$ 10.35	$ 13.76	$ 20.39	$ 12.41
2004	$ 9.79	$ 11.01	$ 14.50	$ 21.36	$ 13.03
2005	$ 10.07	$ 11.02	$ 14.06	$ 21.10	$ 12.91
2006	$ 11.91	$ 12.40	$ 16.38	$ 25.38	$ 14.96
2007	$ 13.60	$ 13.39	$ 17.68	$ 28.48	$ 16.38
2008	$ 13.08	$ 14.17	$ 18.14	$ 27.45	$ 16.67
2009	$ 10.80	$ 13.23	$ 18.10	$ 29.32	$ 16.10
Period Change					
2003-2008	33.5%	36.9%	31.8%	34.7%	34.3%
2003-2009	10.3%	27.9%	31.5%	43.8%	29.7%
Annual Change					
2003-2008	6.7%	7.4%	6.4%	6.9%	6.9%
2003-2009	1.7%	4.6%	5.3%	7.3%	5.0%

Appendix A-2

The change over time is shown in graphic form in Exhibit 3 below.

Exhibit 3: Marina Del Rey Independently Priced Slip Pricing Trends



Appendix A-2

Impact of Newness

Within the 2,438-slip total inventory of independently priced slips, there are two adjacent marinas (Parcels 111 and 112) accounting for 287 slips that were completely rebuilt in 2004 and 2006. These marinas had sufficient time to fill up and to season, and therefore, their pricing presents an interesting basis for comparing new and non-new slips. The tabulation of patterns in these new slips is shown in Exhibit 4 below.

Exhibit 4: Marina Del Rey Independently Priced Slips – New Slip Pricing Trends

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	123	39	39	86	287
Assumed Midpoint (LF)	20.0	30.0	42.5	55.0	34.9
Year	**12' - 25'**	**26' - 35'**	**36'-50'**	**50' +**	**Total**
2003	$ 10.00	$ 12.50	$ 14.50	$ 20.00	$ 15.76
2004	$ 10.66	$ 11.64	$ 14.69	$ 21.52	$ 16.57
2005	$ 11.00	$ 11.75	$ 15.00	$ 21.25	$ 16.59
2006	$ 11.75	$ 13.25	$ 19.00	$ 26.50	$ 20.09
2007	$ 11.75	$ 13.75	$ 19.50	$ 30.63	$ 22.18
2008	$ 11.84	$ 13.75	$ 19.50	$ 30.63	$ 22.20
2009	$ 13.50	$ 17.00	$ 22.50	$ 33.00	$ 24.61
Period Change					
2003-2008	18.4%	10.0%	34.5%	53.1%	40.9%
2003-2009	35.0%	36.0%	55.2%	65.0%	56.1%
Annual Change					
2003-2008	3.7%	2.0%	6.9%	10.6%	8.2%
2003-2009	5.8%	6.0%	9.2%	10.8%	9.4%

Appendix A-3

In this analysis, which is provided in considerable more depth on pages A3 – A6 of Appendix A, it is manifest that the new slips command generally higher prices and not surprisingly a somewhat greater rate of increase but that the general impact of newness is less than the impact of size and the size patterns generally hold true and carry more weight than whether or not it is a new slip. More specifically, the average price on the new slips is $33.00 as distinguished from $29.32 as the average slip price. However, it should also be noted that the location of the new slips at Parcels 111 and 112 may have some effect on their higher prices given their strong location.

Adjacency Affected Slips

There are a total of 1,786 slips in the eight marinas of which three are operated by yacht clubs. The general pattern of increase has been somewhat higher and vacancies, which are discussed later, have also been somewhat higher. This may well reflect the fact that it is necessary to maintain vacancy to accommodate other collateral uses of these leaseholds and accordingly, there is less restraint on raising rents to avoid having vacancy. The collective data do, however, represent a mixture of somewhat opposite tendencies. Yacht clubs tend to stay full, while marinas operated in conjunction with hotels and boat yards must maintain vacancy so as to accommodate customers for their primary business.

Arguably, many of the independently priced marinas seek to optimize total revenue by generally minimizing vacancy. This may not be the case for those that are adjacency affected.

Detailed Supporting Analysis

Attached to this report, as Appendix A is a 31-page set of tabulations and graphs. Pages 1-9 provide summaries for independently priced slips, adjacency affected slips and finally for all slips combined. The balance of the appendix is taken up with a standard set of detailed tabulations for each of the 20 marinas in question. Please note that the adjacency affected marinas were, at the direction of DBH, not surveyed for 2009 updates, so their information is available only for the DBH dataset which is from 2003 to 2008.

PRICING TRENDS IN OTHER SOUTHERN CALIFORNIA MARINAS

Coverage of Survey

A total of 12 Southern California marinas were surveyed, one in Long Beach, one in San Pedro, two in Redondo Beach, two in Dana Point, four in Newport Beach and two at the Channel Islands Harbor in Ventura County. In the aggregate, this represented almost 8,300 slips. They ranged widely from basically semi-subsidized operations such as Alamitos Bay in Long Beach, which is operated directly by the City of Long Beach and not a profit maximizing situation, to the smaller but very highly priced and profit maximizing marinas in Newport Beach including Bayside. A complete list of the marinas surveyed and their distribution of slips by slip length is provided in Exhibit 5 below.*

Exhibit 5: 2009 Slip Inventory of Surveyed Southern California Marinas

Marinas	Location	Total	12' - 25'	26' - 35'	36'-50'	50' +
Marina Del Rey						
Independently Priced *		2,442	612	1,088	593	149
Adjacency Affected		1,786	603	811	327	45
Total MDR Slips		**4,228**	**1,215**	**1,899**	**920**	**194**
SoCal Marinas						
Alamitos	Long Beach	1,966	814	667	432	53
Cabrillo	LA / San Pedro	882	0	511	338	33
King Harbor	Redondo Beach	827	59	578	151	39
Port Royal	Redondo Beach	338	157	149	26	6
Dana Point	Dana Point	1,436	752	474	168	42
Dana West	Dana Point	981	288	511	160	22
Lido	Newport Beach	251	60	116	50	25
Lido Dry Stack	Newport Beach	230	77	77	76	0
Bayside	Newport Beach	101	40	28	6	27
Newport Dunes	Newport Beach	429	24	335	70	0
Channel Islands	Ventura	403	28	105	234	36
Anacapa	Ventura	438	134	158	99	47
Total Competitive Sample Slips		**8,282**	**2,433**	**3,709**	**1,810**	**330**

Appendix B-1

Of the 12 marinas, consistent data over the entire period 2003 to 2009 is available only for nine of them. Historical data was not available for Cabrillo, Lido Dry Stack and Newport Dunes marinas. They were, however, added to the current survey since it was felt that they represented potentially meaningful comparisons.

Please note also that in the subsequent discussion and comparisons to Marina del Rey, the comparisons are made only to independently priced marinas in Marina del Rey and not to all marinas because of the potential price bias in those that are operated in connection with or adjacent

* Exhibit 5 has been updated to reflect the correct slip distribution in Cabrillo Marina. The original slip distribution provided to ADK&A was incorrect. Corrected data was provided during the public comment period. This change has no effect on any of the other charts contained in the report.

to other revenue producing uses.

Pricing Trends

Of the approximately 8,300 slips listed in Exhibit 5, the nine marinas for which pricing data are available represent a total of 6,741 slips.

The pricing trends by slip size for those nine marinas closely parallel in shape and character with the trends for Marina del Rey with some minor but noteworthy variations. In Exhibit 6 below, the pattern of increase by slip size is shown for all of the nine marinas collectively.

Exhibit 6: Weighted Average of SoCal Marina Pricing Trends By Slip Size

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	2,332	2,786	1,326	297	6,741
Assumed Midpoint (LF)	20.0	30.0	42.5	55.0	30.10
Year	12' - 25'	26' - 35'	36'-50'	50' +	
2003	$9.39	$10.44	$10.87	$15.46	$10.72
2004	$9.68	$10.83	$11.35	$16.40	$11.16
2005	$9.87	$11.11	$11.50	$17.09	$11.42
2006	$11.48	$12.43	$13.31	$18.95	$12.98
2007	$11.61	$13.22	$15.25	$20.48	$14.00
2008	$12.00	$14.22	$16.88	$21.92	$15.07
2009	$12.04	$14.76	$17.01	$22.34	$15.37
Period Change					
2003-2008	27.8%	36.2%	55.2%	41.8%	40.5%
2003-2009	28.2%	41.3%	56.4%	44.5%	43.3%
Annual Change					
2003-2008	5.6%	7.2%	11.0%	8.4%	8.1%
2003-2009	4.7%	6.9%	9.4%	7.4%	7.2%

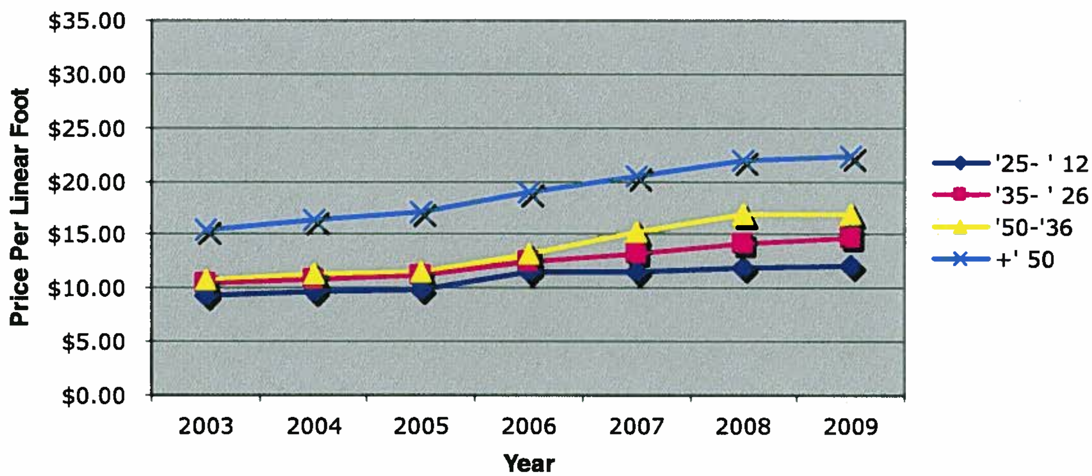
Appendix B-2

While, in general, the pattern of price increases by slip size parallels that in Marina del Rey, there are some noteworthy differences. For one thing, the rates of increase have been generally much higher in the other Southern California marinas than in Marina del Rey. The contrast is present in almost all categories when measuring the average annual increase between 2003 and 2009. The pattern is quite close for the largest slips of 50 feet or longer with 7.4% in Southern California and 7.3% per year in Marina del Rey. Smaller slip prices have increased much more rapidly outside of Marina del Rey at an average annual rate of 4.7% versus 1.7% in Marina del Rey. Similar but less dramatic patterns of more rapid increase are shown for the two intervening boat sizes.

Also of some interest is the fact that for smaller size boats, i.e. those of 35 feet or less, average rates are higher outside of Marina del Rey than they are in Marina del Rey. For example, boats of less than 25 feet have an average 2009 slip rental of $12.04 per lineal foot outside Marina del Rey and an average of only $10.80 in Marina del Rey. The comparison is proportionally much the same for boats between 26 and 35 feet at $14.76 per lineal foot for Southern California marinas and only $13.23 per lineal foot for Marina del Rey. On the other hand, average rates for boats 36 feet or longer are slightly higher ($18.0 versus $17.01 for 36-50 feet) in Marina del Rey when comparing to the Southern California average. The contrast is particularly strong in the 50 foot or longer slips because in part that category is dominated by relatively new large slips in Marina del Rey at an average price of $29.32 per lineal foot versus the average of $22.34 in Southern California marinas.

The actual pattern of growth over time, which has been fairly steady, and did not have the recent dip that Marina del Rey did, is shown in Exhibit 7.

Exhibit 7: Weighted Average of SoCal Marina Slip Pricing Trends

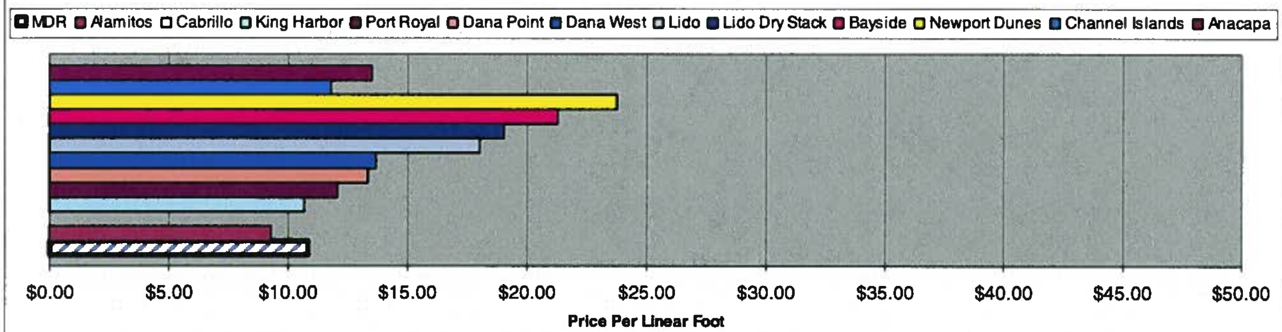


Appendix B-2

Relative Pricing of Marina del Rey

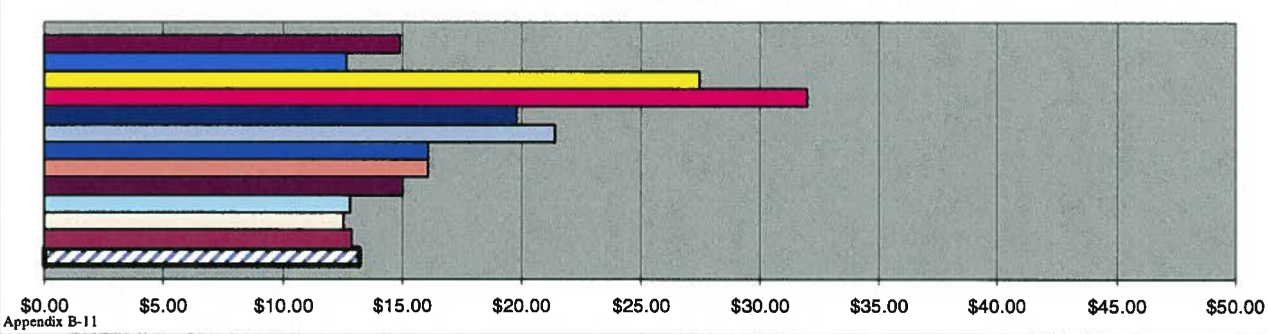
In addition to the averages given above, it is of some interest to establish how Marina del Rey marinas compare with marinas elsewhere in Southern California individually. In Exhibit 8, there are four separate bar charts. In each chart the 12 Southern California marinas for which 2009 price data was obtained are compared to the Marina del Rey average. In this comparison, it is particularly interesting to note that one marina in particular in Southern California, Bayside in Orange County, has consistently very high rates particularly for larger boats. Marina del Rey is largely in the middle or at the lower end of pricing for boats of 35 feet or less. In the category 36-50 feet, even though the Marina del Rey average is higher, there are actually six other Southern California marinas with higher average rates. Only in the case of the 50 feet or longer slips are Marina del Rey rates near the upper end of the range and even then they are significantly lower than Bayside.

Exhibit 8: Comparison of 2009 Southern California Marina Slip Pricing By Slip Size
12'-25' 2009 Slip Pricing Comparion of SoCal Marinas



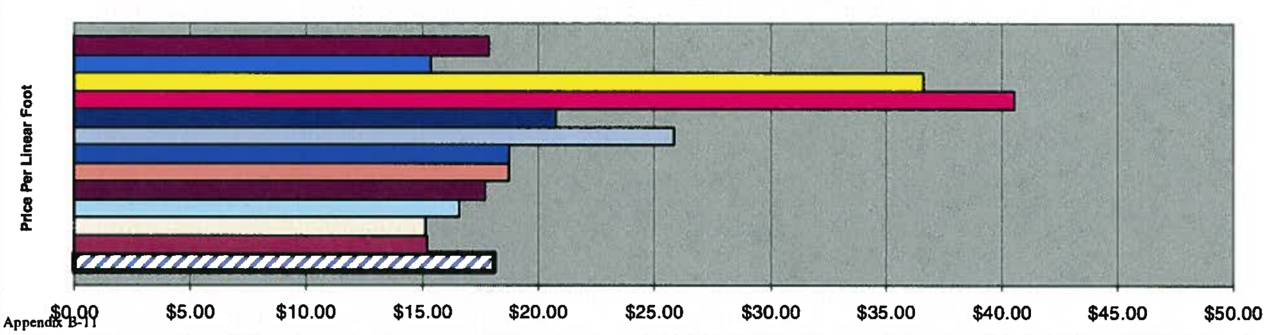
Appendix B-11

26'-35' 2009 Slip Pricing Comparion of SoCal Marinas



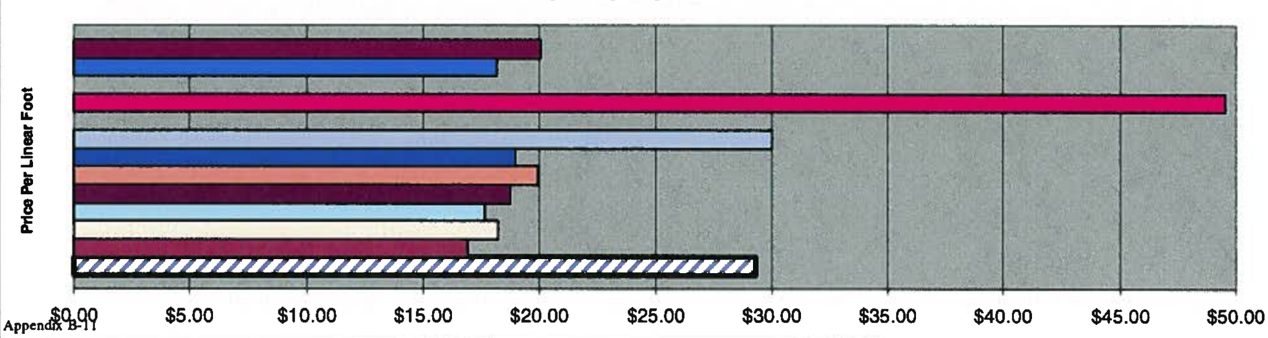
Appendix B-11

36'-50' 2009 Slip Pricing Comparion of SoCal Marinas



Appendix B-11

50'+ 2009 Slip Pricing Comparion of SoCal Marinas



Appendix B-11

Quality and Appearance Considerations

The site surveys conducted by ADK&A generated the following observations.

Dana Point marinas are older and planning major improvements in 2010, but at the present time the concrete docks are in average condition and do not show deferred maintenance. Boats in the harbor are of average quality.

Newport Beach marinas appear to be in very good condition with mostly concrete docks. The boats are from spectacular to average. There is a bridge to pass under in order to access Newport Dunes marina and therefore it is restricted to power boats without high fly-bridges. All except 5 slips from a total of 450 are less than 46 feet long so this marina has smaller and nice quality boats but not generally the very special luxury yachts seen in the main harbor marinas of Newport Beach.

Bayside Marina in Newport Beach is in very good condition and boats are well maintained. Small slips of less than 25 feet are about 40% of the 101 total slips.

Lido Yacht Anchorage is well maintained, but has an awkward access from the land side through small industrial sites and boat yards. It has 251 slips with about 62% of them less than 30 feet long. The boats that were visible appear to be in very good condition.

Alamitos Bay Marina in Long Beach has lots of deferred maintenance on the docks. Most are still wooden docks with a very low profile to the water. The boats are average to poor in appearance with more boats of older vintage than other marinas. Nevertheless, Alamitos Bay and the boats in it are not in as much disrepair as the marinas of Wilmington in the Port of Los Angeles area.

Cabrillo Marina has the appearance of a newer and well maintained marina. Boats are nice and the docks in good condition. This is a very large marina with 885 total slips and about 84% or 743 slips that are between 26 feet and 35 feet long, so these are generally smaller boats of modest quality.

King Harbor Marina and Port Royal in Redondo Beach are older marinas with wooden docks that have a coating material applied to the top. The overall conditions are average and the boats range from fair to average condition. The marinas try to keep boats in good condition by requiring older boats to present a survey and photos for slip approvals.

Channel Islands Harbor Marina is new and Anacapa Isle Marina has been upgraded to concrete docks with all single-loaded slips. Both marinas are in good condition and boats are of average quality.

By way of comparison the same survey provided the following characterization of Marina del Rey. Marina del Rey has a few new marinas of exceptional quality with concrete docks and a few marinas that are in poor condition with wooden docks sitting very low in the water. Boats range from outstanding quality, especially on the main channel in newer marinas, to average and poor quality boats in older marinas.

Detailed Findings

An analysis generally parallel to that of Marina del Rey marina pricing is provided in Appendix B which provides a detailed tabulation of each of the nine marinas and their price increases over time.

Of some interest are the series of four charts which are titled "Slip Pricing Trends MDR v. SoCal Marinas: 2003-2009" on pages B-7 through B-10 in Appendix B. This shows that with the exception of the last couple of years, pricing trends have been remarkably parallel between Marina del Rey and other areas with the same observation previously made that they are slightly higher for the larger slips and slightly lower for the smaller slips. Marina del Rey has also been somewhat more volatile possibly reflecting the introduction of approximately 300 new slips at significantly higher prices in Parcels 111 and 112. Another factor contributing to volatility may be the periodic closing of significant marinas for refurbishing which tends to change short-term price trends.

VACANCY TRENDS IN MARINA DEL REY

Vacancies are low in nearly all Southern California marinas. Long waiting lists exist in Dana Point marinas and somewhat shorter ones in King Harbor. Alamitos Bay in Long Beach has about 2% vacancy overall in a very large marina. Newport Beach marinas have vacancies in smaller slips that are considered seasonal when small boats are removed for the winter.

In general, Marina del Rey slips have recently enjoyed very high occupancy rates. In this instance as in some other parts of the analysis, the primary focus of statistical analysis is on independently priced slips. Within this group, overall vacancy over the period 2003-2009 has ranged from a low of 2.2% to a high of 4.5% in 2005 and is currently at approximately 3.0%.

Significantly, there are major variations in vacancy patterns with the lowest vacancies consistently in the 50 foot and greater category and the highest vacancies consistently except for the most recent data in the 12 to 25 foot data.

As you will see in the footnote to Exhibit 10, all the data points are for midyear, which is usually the busier season.**

Exhibit 9: Vacancy Trends for Independently Priced MDR Slips

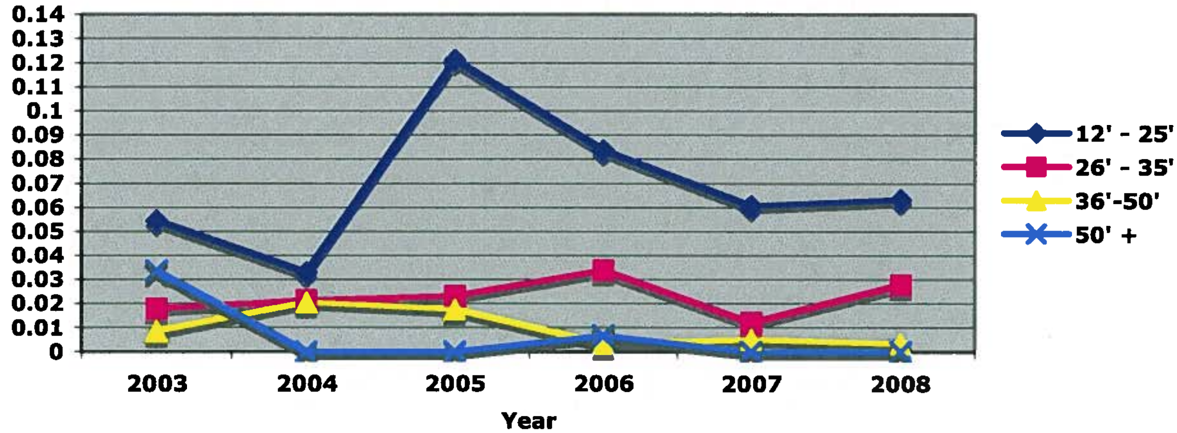
Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	612	1,088	593	149	2,442
	12' - 25'	**26' - 35'**	**36'-50'**	**50' +**	**Total**
2003	5.4%	1.8%	0.8%	3.4%	2.6%
2004	3.3%	2.1%	2.0%	0.0%	2.3%
2005	12.1%	2.3%	1.8%	0.0%	4.5%
2006	8.4%	3.4%	0.3%	0.7%	3.7%
2007	6.0%	1.2%	0.5%	0.0%	2.2%
2008	6.3%	2.8%	0.3%	0.0%	2.9%

Appendix C-2

The pattern of vacancy is shown graphically in Exhibit 10. In this exhibit, the most recent 2009 data is not plotted since it is clear that a trend analysis would be inappropriate. Both the table and the figure clearly indicate how low vacancy consistently is for the larger slips relative to the smaller slips.

** Efforts to obtain vacancy data for 2009 produced anomalous and internally inconsistent results, which appear to reflect patterns of seasonal changes that vary widely among different marinas.

Exhibit 10: MDR Vacancy Patterns - Independently Priced Slips

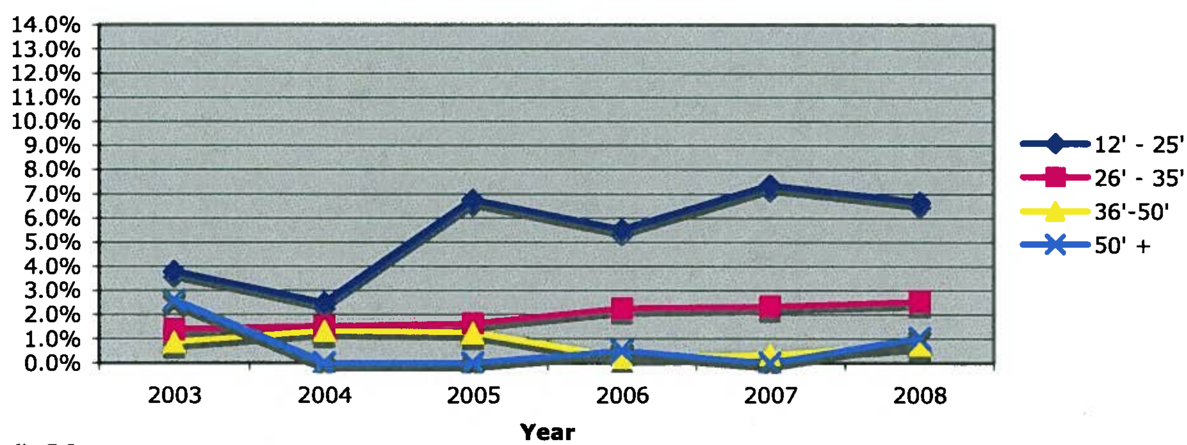


Appendix C-2

This finding alone would substantiate the fact that the pattern of changing mix from smaller slips to larger slips and the corresponding reduction in total number of slips will not necessarily represent a shortage but rather a redistribution and a more even distribution of vacancy across the different sized configurations.

If, in fact, all slips not merely independently priced slips are considered, vacancy rates are generally somewhat higher as shown in Exhibit 11.

Exhibit 11: MDR Vacancy Patterns Š All Slips



Appendix C-5

Detailed Analysis

Appendix C provides a more detailed treatment of vacancy including vacancy patterns by individual marinas. Several of the marinas have virtually no reported vacancy and have operated full or with almost no waiting list for much of the time period. What is interesting is that the vacancy patterns in Parcels 111 and 112 show very high vacancies very briefly in 2005 when the new slips opened up and these were quickly filled in and now those two marinas reflect generally very low vacancy rates.

While 2009 vacancy data was not included in the summary tables or graphs due to anomalous results, the data points are included in the individual marina data contained in Appendix C.

AMENITY PATTERNS

At the request of DBH, the slip pricing and vacancy survey was expanded to incorporate a brief survey of amenities available at two groups of marinas, the 11 independently operated marinas at Marina del Rey and 11 surveyed marinas elsewhere in Southern California.

The general pattern of results was as follows:

1. Amenities found in virtually all marinas include restrooms, showers and telephone hookups.

2. Amenities found in most but not all marinas include TV cable hookups, pump out stations, dock boxes and laundry facilities.

3. Amenities generally present only in recently constructed or higher priced marinas include wireless internet, fitness or gym facilities and a swimming pool.

Exhibit 12 provides a tabulation of amenity patterns in 21 enumerated marinas with the ones in Southern California listed as the first 11 and then the next 10 representing Marina del Rey. With the exception of TV and cable hookups, there appears to be no systematic difference in Marina del Rey from other surveyed marinas. Orange County marinas consistently have TV or cable hookups whereas only four of the 10 marinas listed in Marina del Rey have such hookups. On the other hand, wireless internet facilities are somewhat more prevalent in Marina del Rey than they are elsewhere in Southern California. Pump out stations are available at most but not all of the marinas in both classes as are laundry facilities. Swimming pools and fitness gyms are fairly scarce and are present only in three of the Marina del Rey marinas and only two of the others in Southern California.

More amenities are generally offered at newer and upgraded marinas, but usually are in marinas with higher rates for slips. Standard amenities are basic restrooms, showers, dock boxes, and telephone hookups. Additional features at several marinas include internet connections, fitness centers, lounges and pools. Marina del Rey appears to have a mix of marina amenities throughout the harbor to fit nearly all life styles. However, there may be a cost/benefit factor with excess amenities that would discourage some tenants if other accommodations are available.

Exhibit 12: Amenities at Selected Southern California Marinas and Marina del Rey

No	Marina	Restrooms	Showers	Telephone Hookups	TV Cable Hookups	Wireless Internet	Dock Boxes/ Lockers	Pump-out Station	Laundry Facilities	Lounge	Fitness/ Gym	Pool
1	Dana Point	X	X	X	X							
2	Dana Point West	X	X	X	X		X	X	X			
3	Newport Dunes	X	X		X		X			X	X	X
4	Bayside	X	X	X	X		X	X				
5	Lido Anchorage	X		X	X			X	X			
6	Alamitos Bay	X	X					X	X			
7	Cabrillo	X	X	X			X	X		Plaza		
8	King Harbor	X	X	X	X		X	X	X			
9	Port Royal	X	X	X	X							
10	Channel Island Harbor	X	X	X	X	X	X					
11	Anacapa Isle	X	X	X	X	X	X		X	X	X	X
12	Esprit I (MDR) (P-12)	X	X	X	X	X		X	X		X	
13	Marina Harbor (MDR) (P - 111/112)	X	X	X	X	X	X	X	X	Pavillion	X	X
14	Mariner's Bay (P -28)	X	X	X	X	X	X		X			
15	Tahiti (P - 7)	X	X	X			X		X			
16	Neptune (P - 10)	X	X									
17	Villa del Mar (P-13)	X	X	X		X	X		X		X	X
18	Dolphin (P -18)	X	X	X			X	X	X			
19	Panay Way (P - 20)	X	X	X			X	X	X			
20	Holiday Harbor (P - 21)	X	X				X	X				
21	Bay Club (P - 8)	X	X	X			X					

One conclusion to be drawn from this discussion is that Marina del Rey is in no way materially deficient in amenities and in some important respects, particularly in the newly constructed marinas, has a richer palette of amenities than most of the competition.

Of particular relevance to this observation is that a lack of amenities is not a basis for explaining why Marina del Rey's slips are less expensive than elsewhere in Southern California, which is in fact the case for slips of 35 feet or less on average.

APPARENT IMPACT OF CURRENT RECESSION

As part of the follow-up survey conducted by ADK&A in February 2009, marina operators elsewhere in Southern California were asked a series of questions about changes since July 2008 at which point the economy began to manifest a downturn. The questions were whether or not there had been a reduction in demand, whether there were increased vacancies, whether any change was differentiated by size. The marina operators were also asked if they had changed their rates since July 2008. At the time the survey was conducted, few if any of the marinas surveyed reported any visible change in demand. Only one marina in Ventura County, Anacapa Isle, reported a decline in demand and an increase in vacancy and said it was true in all sizes. The only other positive response to the question of whether there had been a change since 2008 was at the Lido Yacht Anchorage in Orange County which also reported an increase in vacancy and a decline in demand but went on to note that many big boats vacate the anchorage during the winter and go elsewhere.

Virtually all of the marinas surveyed reported no change in rents since July 2008 except for the Dana West Marina which was up 3.3% last fall and the Alamitos Bay Marina in Long Beach which was up anywhere from 3% to 20% depending on slip size.*

* As of February 2009 when data was collected (not updated).

APPENDIX A: Slip Pricing and Patterns in Marina Del Rey

Version: MDR - Slip Pricing Data 2009-3-3

TABLE OF CONTENTS

INVENTORY OF MDR MARINAS

Parcel	Marina	Total	12' - 25'	26' - 35'	36'-50'	50' +
	Independently Priced					
7	Tahiti Marina	214	0	132	61	21
8	Bay Club	231	0	170	61	0
10	Neptune	184	14	150	20	0
13	Villa Del Mar	186	0	33	145	8
15	Bar Harbor / Espirit 2	215	98	65	52	0
18	Dolphin Marina	424	200	107	83	34
20	Panay Way / Tradewinds Marina	145	54	73	18	0
21	Holiday Harbor	183	122	50	11	0
28	Mariner's Bay	369	0	267	102	0
111	Marina Harbor	112	21	28	17	46
112	Marina Harbor	175	102	11	22	40
	Sub-Total	**2,438**	**611**	**1,086**	**592**	**149**
	Adjacency Affected					
41	Catalina Yacht Anchorage	148	101	46	1	0
42/43	MDR Hotel	349	107	192	50	0
44	Pier 44	397	273	114	10	0
47	SMYC	173	56	109	8	0
53	The Boatyard	103	32	62	9	0
54	Windward Yacht Club	53	0	4	35	14
125	Marina City	316	13	205	80	18
132	California Yacht Club	253	25	72	143	13
	Sub-Total	**1,792**	**607**	**804**	**336**	**45**
	TOTAL	**4,230**	**1,218**	**1,890**	**928**	**194**
12*	Espirit 1	216	0	30	111	75

Note: Independently Priced Slips are those slips that are not associated with yacht clubs, hotels, boat yards and/or boat sales. These include slips belonging to parcels 7,8,10,13,15,18,20,21,28,111/112.
* Due to the fact that the recently completed Parcel 12 has still not achieved stabilized pricing (vacancy is currently over 60%), it is not included as a part of the summary data tables.

MDR Pricing Data

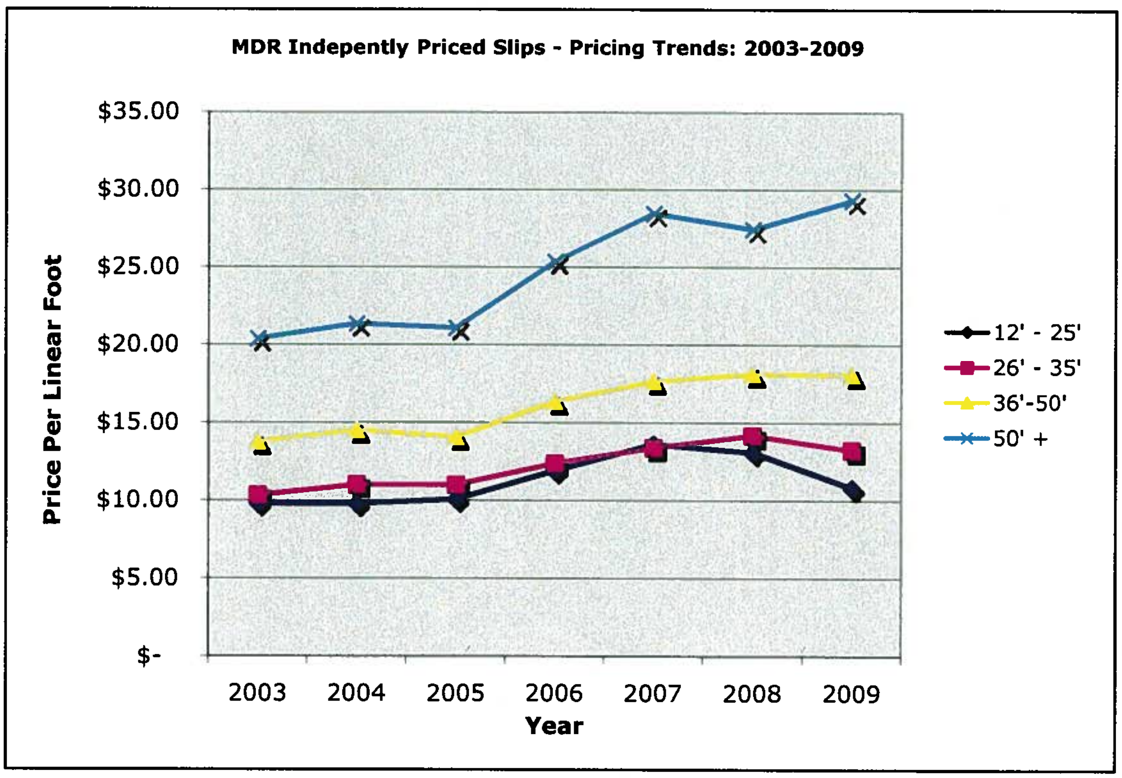
Independently Priced Slips - Weighted Average Pricing Trends *

Number of Slips: **2,438**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total		
Number of Slips	611	1,086	592	149	2,438	**Gross**	**Gross**
Assumed Midpoint (LF)	20.0	30.0	42.5	55.0	32.1	**Potential**	**Potential**
Year	**12' - 25'**	**26' - 35'**	**36'-50'**	**50' +**	**Total**	**Revenue**	**Rev. / Slip**
2003	$ 9.79	$ 10.35	$ 13.77	$ 20.39	$ 12.41	$11,642,127	$4,775
2004	$ 9.79	$ 11.02	$ 14.51	$ 21.36	$ 13.03	$12,222,712	$5,013
2005	$ 10.07	$ 11.02	$ 14.07	$ 21.10	$ 12.91	$12,106,924	$4,966
2006	$ 11.91	$ 12.40	$ 16.38	$ 25.38	$ 14.96	$14,034,184	$5,756
2007	$ 13.60	$ 13.39	$ 17.68	$ 28.48	$ 16.39	$15,369,454	$6,304
2008	$ 13.07	$ 14.17	$ 18.14	$ 27.45	$ 16.67	$15,636,328	$6,414
2009	$ 10.80	$ 13.23	$ 18.09	$ 29.32	$ 16.10	$15,102,171	$6,194
Period Change							
2003-2008	33.5%	37.0%	31.8%	34.7%	34.3%		
2003-2009	10.3%	27.9%	31.4%	43.8%	29.7%		
Annual Change							
2003-2008	6.7%	7.4%	6.4%	6.9%	6.9%		
2003-2009	1.7%	4.6%	5.2%	7.3%	5.0%		

Indexed Rates	12' - 25'	26' - 35'	36'-50'	50' +
2003	0.95	1.00	1.33	1.97
2004	0.89	1.00	1.32	1.94
2005	0.91	1.00	1.28	1.92
2006	0.96	1.00	1.32	2.05
2007	1.02	1.00	1.32	2.13
2008	0.92	1.00	1.28	1.94
2009	0.82	1.00	1.37	2.22

Note: In most cases, 2003-2008 rents given are the midpoint of MDR pricing survey data for each size category.
*** Due to the fact that the recently completed Parcel 12 has still not achieved stabilized pricing (vacancy is currently over 60%), it is not included as a part of the summary data tables.**



MDR Pricing Data

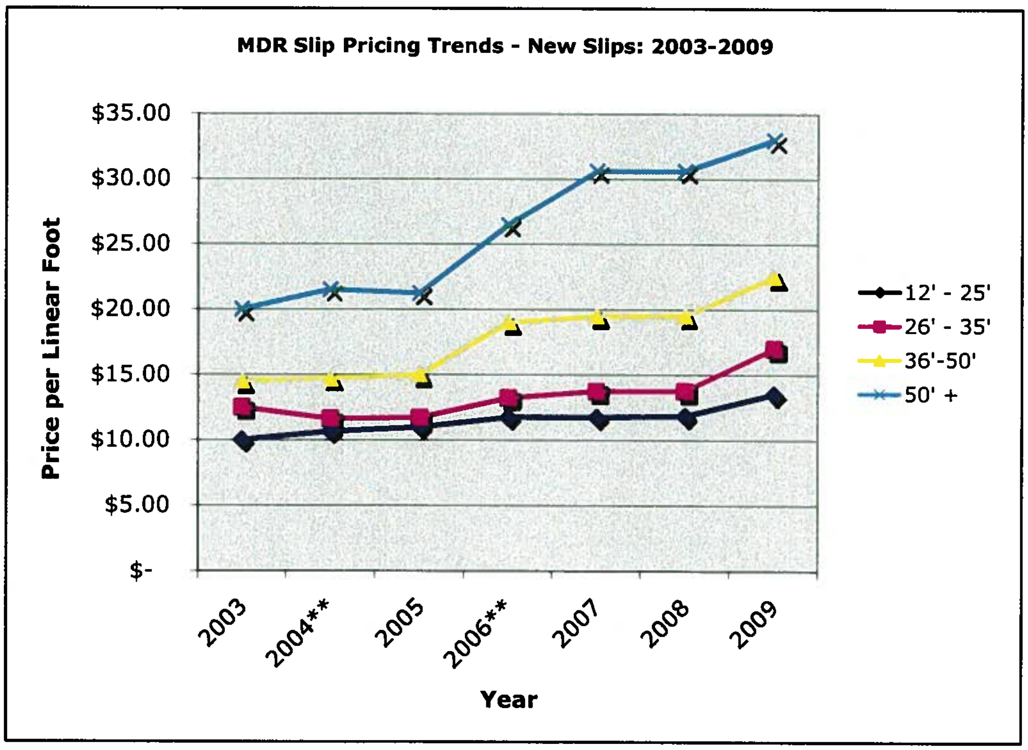
Independently Priced Slips - New Slip Pricing Trends (Parcels 111, 112) *

Number of Slips: 287

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total		
Number of Slips	123	39	39	86	287		
Assumed Midpoint (LF)	20.0	30.0	42.5	55.0	34.9		
Year	**12' - 25'**	**26' - 35'**	**36'-50'**	**50' +**	**Total**	**Gross Potential Revenue**	**Gross Potential Rev. / Slip**
2003	$ 10.00	$ 12.50	$ 14.50	$ 20.00	$ 15.76	$1,894,305	$6,600
2004**	$ 10.66	$ 11.64	$ 14.69	$ 21.52	$ 16.57	$1,991,820	$6,940
2005	$ 11.00	$ 11.75	$ 15.00	$ 21.25	$ 16.59	$1,994,190	$6,948
2006**	$ 11.75	$ 13.25	$ 19.00	$ 26.50	$ 20.09	$2,414,940	$8,414
2007	$ 11.75	$ 13.75	$ 19.50	$ 30.63	$ 22.18	$2,666,205	$9,290
2008	$ 11.84	$ 13.75	$ 19.50	$ 30.63	$ 22.20	$2,668,725	$9,299
2009	$ 13.50	$ 17.00	$ 22.50	$ 33.00	$ 24.61	$2,957,805	$10,306
Period Change							
2003-2008	18.4%	10.0%	34.5%	53.1%	40.9%		
2003-2009	35.0%	36.0%	55.2%	65.0%	56.1%		
Annual Change							
2003-2008	3.7%	2.0%	6.9%	10.6%	8.2%		
2003-2009	5.8%	6.0%	9.2%	10.8%	9.4%		

Indexed Rates	12' - 25'	26' - 35'	36'-50'	50' +
2003	0.80	1.00	1.16	1.60
2004	0.92	1.00	1.26	1.85
2005	0.94	1.00	1.28	1.81
2006	0.89	1.00	1.43	2.00
2007	0.85	1.00	1.42	2.23
2008	0.86	1.00	1.42	2.23
2009	0.79	1.00	1.32	1.94

Note: In most cases, 2003-2008 rents given are the midpoint of MDR pricing survey data for each size category.
*** Due to the fact that the recently completed Parcel 12 has still not achieved stabilized pricing (vacancy is currently over 60%), it is not included as a part of the summary data tables.**
**** In 2004, a reconfiguration of parcel 112 was completed changing total slips from 315 to 175.**
**** In 2006, a reconfiguration of parcel 111 was completed changing total slips from 248 to 112.**



MDR Pricing Data

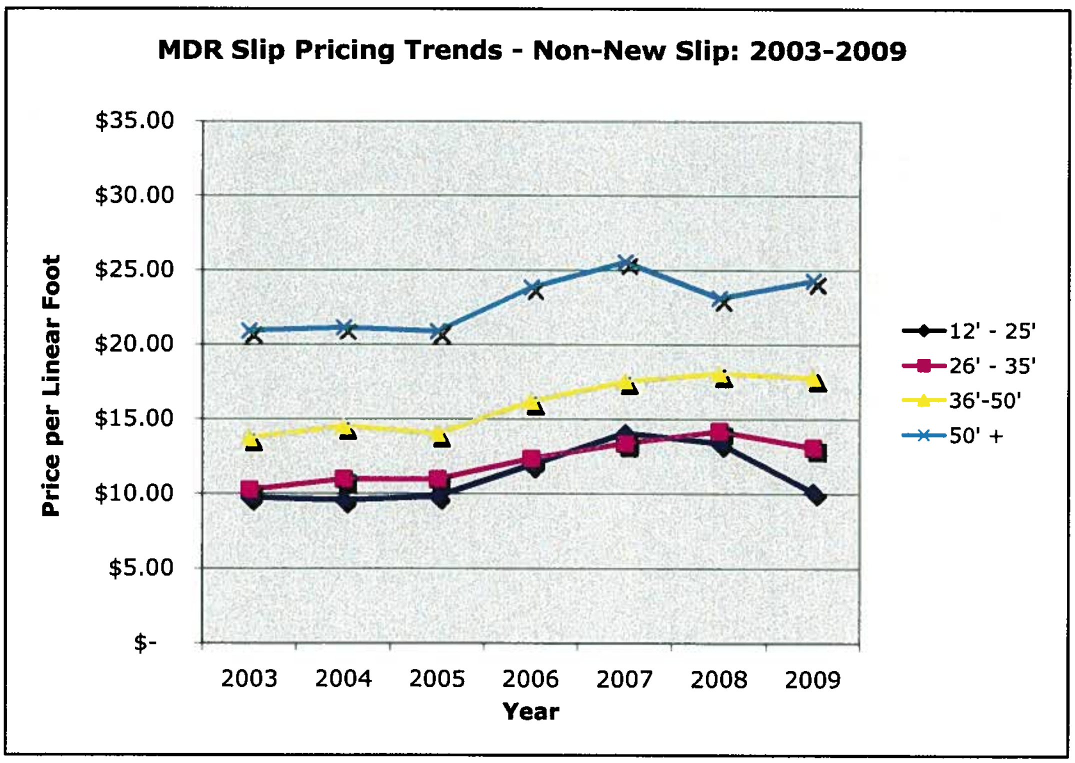
Independently Priced Slips - Non-New Slip Pricing Trends

Number of Slips: 2,151

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total	Gross Potential Revenue	Gross Potential Rev. / Slip
Number of Slips	488	1,047	553	63	2,151		
Assumed Midpoint (LF)	20.0	30.0	42.5	55.0	31.7		
Year	**12' - 25'**	**26' - 35'**	**36'-50'**	**50' +**	**Total**		
2003	$ 9.74	$ 10.27	$ 13.71	$ 20.91	$ 11.92	$9,747,822	$4,532
2004	$ 9.57	$ 10.99	$ 14.50	$ 21.14	$ 12.51	$10,230,892	$4,756
2005	$ 9.84	$ 10.99	$ 14.00	$ 20.90	$ 12.37	$10,112,734	$4,701
2006	$ 11.95	$ 12.37	$ 16.19	$ 23.86	$ 14.21	$11,619,244	$5,402
2007	$ 14.07	$ 13.38	$ 17.55	$ 25.56	$ 15.54	$12,703,249	$5,906
2008	$ 13.39	$ 14.19	$ 18.05	$ 23.12	$ 15.86	$12,967,603	$6,029
2009	$ 10.12	$ 13.09	$ 17.78	$ 24.29	$ 14.85	$12,144,366	$5,646
Period Change							
2003-2008	37.4%	38.2%	31.6%	10.6%	33.0%		
2003-2009	3.9%	27.5%	29.7%	16.1%	24.6%		
Annual Change							
2003-2008	7.5%	7.6%	6.3%	2.1%	6.6%		
2003-2009	0.6%	4.6%	4.9%	2.7%	4.1%		

Indexed Rates	12' - 25'	26' - 35'	36'-50'	50' +
2003	0.95	1.00	1.34	2.04
2004	0.87	1.00	1.32	1.92
2005	0.89	1.00	1.27	1.90
2006	0.97	1.00	1.31	1.93
2007	1.05	1.00	1.31	1.91
2008	0.94	1.00	1.27	1.63
2009	0.77	1.00	1.36	1.86

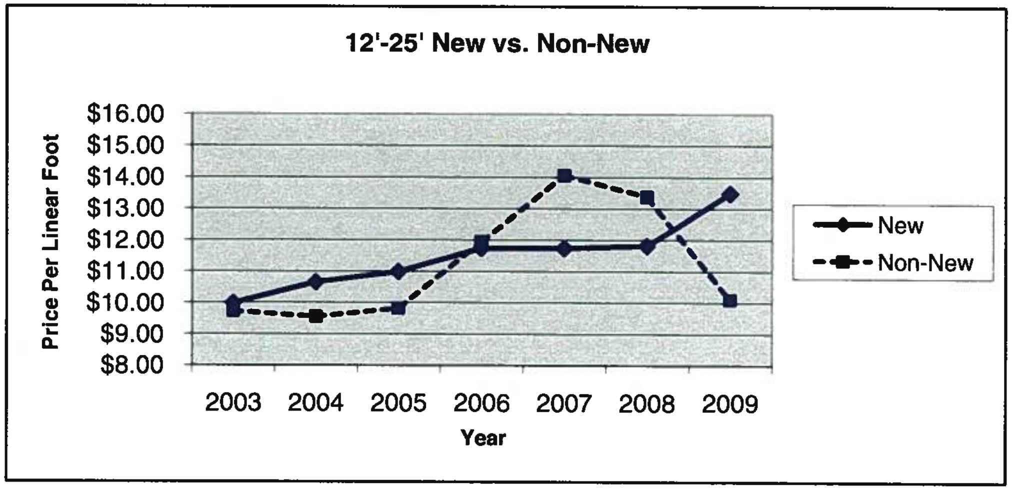
Note: In most cases, 2003-2008 rents given are the midpoint of MDR pricing survey data for each size category.



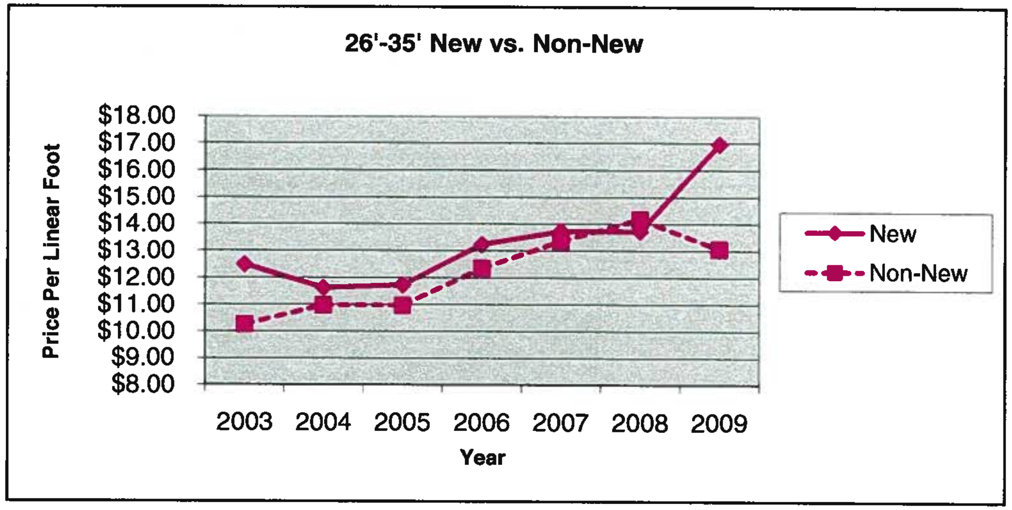
MDR Pricing Data

Independently Priced Slips - Comparison New vs. Non-New Slips

Slip Size	12' - 25'			
	New	Non-New		
Number of Slips	123	488		
	New	Non-New	Delta	%
2003	$ 10.00	$ 9.74	$ 0.26	2.6%
2004	$ 10.66	$ 9.57	$ 1.10	11.5%
2005	$ 11.00	$ 9.84	$ 1.16	11.8%
2006	$ 11.75	$ 11.95	$ (0.20)	-1.7%
2007	$ 11.75	$ 14.07	$ (2.32)	-16.5%
2008	$ 11.84	$ 13.39	$ (1.55)	-11.6%
2009	$ 13.50	$ 10.12	$ 3.38	33.4%
Period Change				
2003-2008	18.4%	37.4%		
2003-2009	35.0%	3.9%		
Annual Change				
2003-2008	3.7%	7.5%		
2003-2009	5.8%	0.6%		



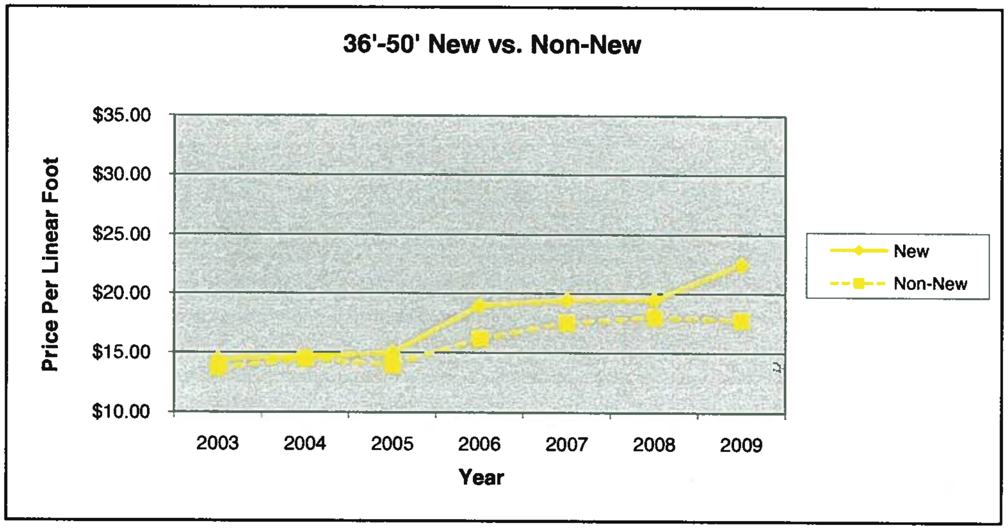
Slip Size	26' - 35'			
	New	Non-New		
Number of Slips	39	1,047		
	New	Non-New	Delta	%
2003	$ 12.50	$ 10.27	$ 2.23	21.8%
2004	$ 11.64	$ 10.99	$ 0.65	5.9%
2005	$ 11.75	$ 10.99	$ 0.76	6.9%
2006	$ 13.25	$ 12.37	$ 0.88	7.2%
2007	$ 13.75	$ 13.38	$ 0.37	2.8%
2008	$ 13.75	$ 14.19	$ (0.44)	-3.1%
2009	$ 17.00	$ 13.09	$ 3.91	29.9%
Period Change				
2003-2008	10.0%	38.2%		
2003-2009	36.0%	27.5%		
Annual Change				
2003-2008	2.0%	7.6%		
2003-2009	6.0%	4.6%		



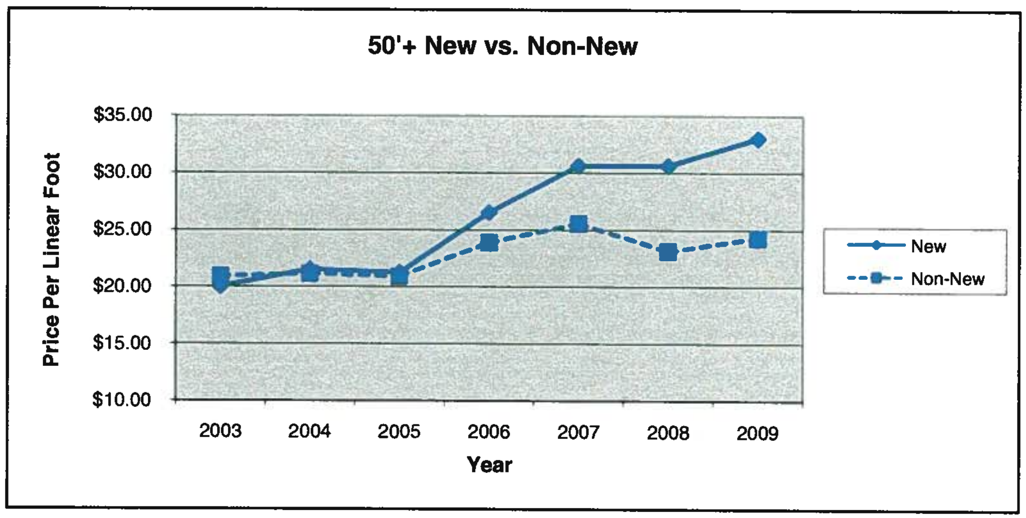
MDR Pricing Data

Independently Priced Slips - Comparison New vs. Non-New Slips

Slip Size	36'-50'			
	New	Non-New		
Number of Slips	39	553		
	New	Non-New	Delta	%
2003	$ 14.50	$ 13.71	$ 0.79	5.7%
2004	$ 14.69	$ 14.50	$ 0.20	1.4%
2005	$ 15.00	$ 14.00	$ 1.00	7.1%
2006	$ 19.00	$ 16.19	$ 2.81	17.3%
2007	$ 19.50	$ 17.55	$ 1.95	11.1%
2008	$ 19.50	$ 18.05	$ 1.45	8.0%
2009	$ 22.50	$ 17.78	$ 4.72	26.5%
Period Change				
2003-2008	34.5%	31.6%		
2003-2009	55.2%	29.7%		
Annual Change				
2003-2008	6.9%	6.3%		
2003-2009	9.2%	4.9%		



Slip Size	50'+			
	New	Non-New		
Number of Slips	86	63		
	New	Non-New	Delta	%
2003	$ 20.00	$ 20.91	$ (0.91)	-4.4%
2004	$ 21.52	$ 21.14	$ 0.38	1.8%
2005	$ 21.25	$ 20.90	$ 0.35	1.7%
2006	$ 26.50	$ 23.86	$ 2.64	11.1%
2007	$ 30.63	$ 25.56	$ 5.07	19.8%
2008	$ 30.63	$ 23.12	$ 7.51	32.5%
2009	$ 33.00	$ 24.29	$ 8.71	35.9%
Period Change				
2003-2008	53.1%	10.6%		
2003-2009	65.0%	16.1%		
Annual Change				
2003-2008	10.6%	2.1%		
2003-2009	10.8%	2.7%		



MDR Pricing Data

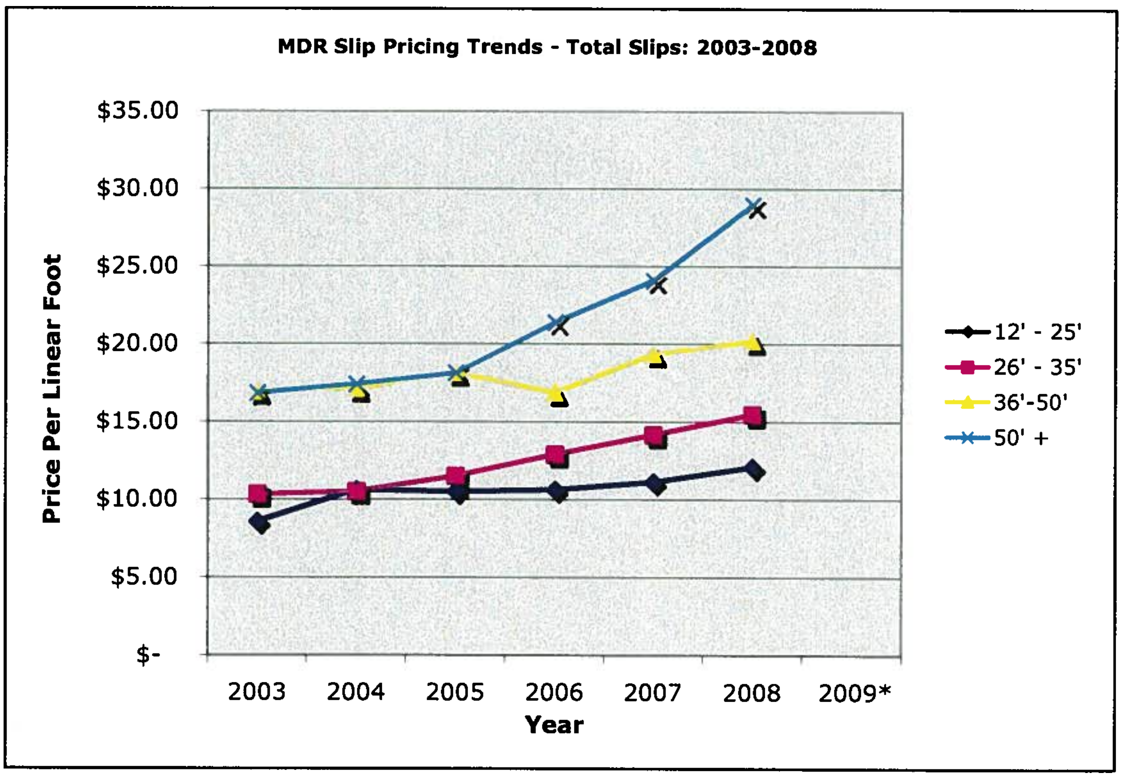
Adjacency Affected Slips - Weighted Average Pricing Trends

Number of Slips: **1,792**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total		
Number of Slips	607	804	336	45	1,792	Gross	Gross
Assumed Midpoint (LF)	20.0	30.0	42.5	55.0	29.6	Potential	Potential
Year	**12' - 25'**	**26' - 35'**	**36'-50'**	**50' +**	**Total**	**Revenue**	**Rev. / Slip**
2003	$ 8.57	$ 10.34	$ 16.93	$ 16.83	$ 12.01	$7,640,980	$4,264
2004	$ 10.63	$ 10.52	$ 17.11	$ 17.40	$ 12.64	$8,044,269	$4,489
2005	$ 10.52	$ 11.53	$ 18.15	$ 18.14	$ 13.39	$8,517,260	$4,753
2006	$ 10.63	$ 12.90	$ 16.87	$ 21.40	$ 13.85	$8,809,224	$4,916
2007	$ 11.12	$ 14.16	$ 19.37	$ 24.10	$ 15.33	$9,754,424	$5,443
2008	$ 12.08	$ 15.47	$ 20.20	$ 28.98	$ 16.60	$10,560,321	$5,893
2009*							
Period Change							
2003-2008	41.0%	49.7%	19.3%	72.2%	38.2%		
2003-2009	N/A	N/A	N/A	N/A	N/A		
Annual Change							
2003-2008	8.2%	9.9%	3.9%	14.4%	7.6%		
2003-2009	N/A	N/A	N/A	N/A	N/A		

Indexed Rates	**12' - 25'**	**26' - 35'**	**36'-50'**	**50' +**
2003	0.83	1.00	1.64	1.63
2004	1.01	1.00	1.63	1.65
2005	0.91	1.00	1.57	1.57
2006	0.82	1.00	1.31	1.66
2007	0.79	1.00	1.37	1.70
2008	0.78	1.00	1.31	1.87
2009	#DIV/0!	1.00	#DIV/0!	#DIV/0!

Note: In most cases, 2003-2008 rents given are the midpoint of MDR pricing survey data for each size category.
* 2009 data was not collected for adjacency affected marinas because study was focused on independent pricing trends



MDR Pricing Data

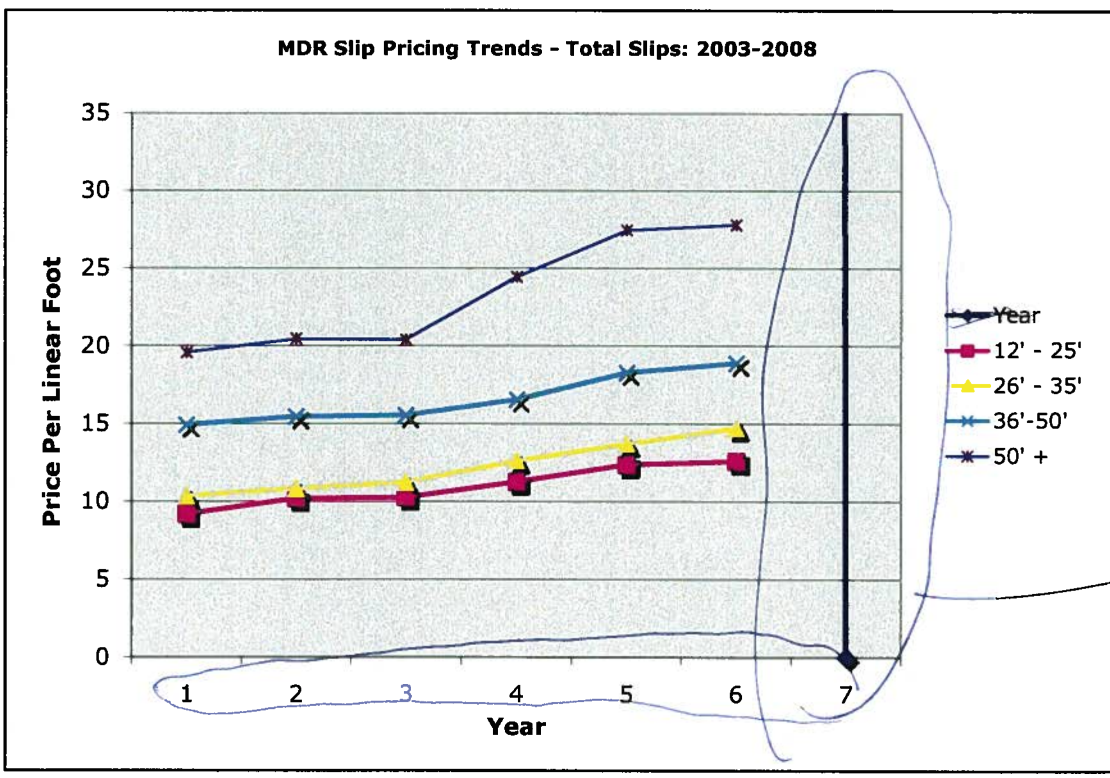
All Slips - Weighted Average Pricing Trends

Number of Slips: **4,230**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total		
Number of Slips	1,218	1,890	928	194	4,230	Gross	Gross
Assumed Midpoint (LF)	20.0	30.0	42.5	55.0	31.0	Potential	Potential
Year	12' - 25'	26' - 35'	36'-50'	50' +	Total	Revenue	Rev. / Slip
2003	$ 9.19	$ 10.34	$ 14.91	$ 19.56	$ 12.25	$19,283,108	$4,559
2004	$ 10.21	$ 10.81	$ 15.45	$ 20.44	$ 12.88	$20,266,981	$4,791
2005	$ 10.29	$ 11.24	$ 15.54	$ 20.42	$ 13.10	$20,624,185	$4,876
2006	$ 11.27	$ 12.61	$ 16.56	$ 24.46	$ 14.51	$22,843,408	$5,400
2007	$ 12.37	$ 13.72	$ 18.29	$ 27.47	$ 15.96	$25,123,878	$5,939
2008	$ 12.58	$ 14.72	$ 18.89	$ 27.81	$ 16.64	$26,196,649	$6,193
2009*							
Period Change							
2003-2008	37.0%	42.4%	26.7%	42.2%	35.9%		
2003-2009	N/A	N/A	N/A	N/A	N/A		
Annual Change							
2003-2008	7.4%	8.5%	5.3%	8.4%	7.2%		
2003-2009	N/A	N/A	N/A	N/A	N/A		

Indexed Rates	12' - 25'	26' - 35'	36'-50'	50' +
2003	0.89	1.00	1.44	1.89
2004	0.94	1.00	1.43	1.89
2005	0.92	1.00	1.38	1.82
2006	0.89	1.00	1.31	1.94
2007	0.90	1.00	1.33	2.00
2008	0.85	1.00	1.28	1.89
2009	#DIV/0!	1.00	#DIV/0!	#DIV/0!

Note: In most cases, 2003-2008 rents given are the midpoint of MDR pricing survey data for each size category.
* 2009 data was not collected for all marinas because study was focused on independent pricing trends



Already fixed

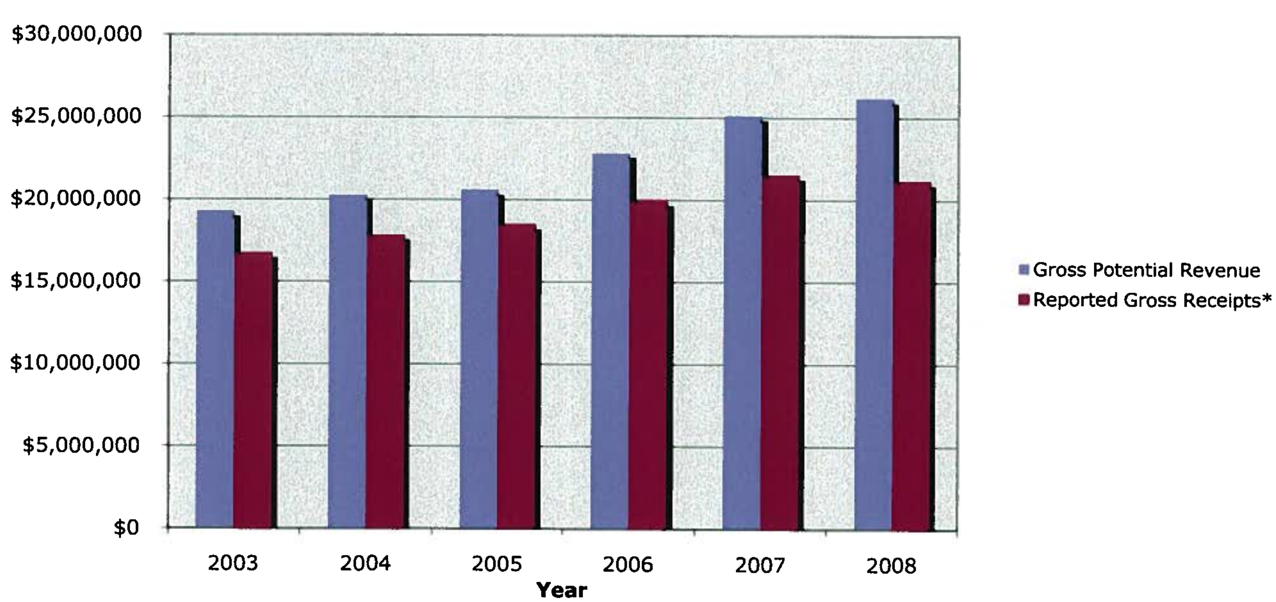
MDR Pricing Data

All Slips - Gross Receipts Comparison: Potential vs. Reported

ALL SLIPS

Number of Slips: **4,230**

	Gross Potential Revenue	Reported Gross Receipts*	Variance	Gross Potential Rev. / Slip
2003	$19,283,108	$16,768,248	($2,514,860)	$4,559
2004	$20,266,981	$17,839,691	($2,427,290)	$4,791
2005	$20,624,185	$18,520,402	($2,103,783)	$4,876
2006	$22,843,408	$19,921,482	($2,921,926)	$5,400
2007	$25,123,878	$21,529,265	($3,594,613)	$5,939
2008	$26,196,649	$21,178,502	($5,018,147)	$6,193
2009	$0	N/A		$0



* Reported Gross Receipts are from data provided by DBH.

** The above table & chart is for illustrative purposes only. Gross Potential Revenue reflects scenario where all slips would be rented at current market prices. Reported Gross Receipts is lower due to existing lease, which are not escalating at the same pace as current market rents.

Independently Priced Slips

MDR Pricing Data

Parcel: **7 - Tahiti Marina**

Number of Slips: **214**

Slip Size	**12' - 25'**	**26' - 35'**	**36'-50'**	**50' +**	**Total**
Number of Slips	0	132	61	21	214
Year					
2003	$ -	$ 11.16	$ 15.14	$ 29.95	
2004	$ -	$ 12.38	$ 18.06	$ 30.15	
2005	$ -	$ 13.35	$ 18.06	$ 30.15	
2006	$ -	$ 13.23	$ 20.04	$ 28.81	
2007	$ -	$ 13.11	$ 22.02	$ 27.47	
2008	$ -	$ 12.99	$ 24.00	$ 26.13	
2009	$ -	$ 12.99	$ 24.00	$ 26.13	
Period Change					
2003-2008	#DIV/0!	16.4%	58.5%	N/A	
2003-2009	#DIV/0!	16.4%	58.5%	N/A	
Annual Change					
2003-2008	#DIV/0!	3.3%	11.7%	N/A	
2003-2009	#DIV/0!	2.7%	9.8%	N/A	

Indexed Rates	**12' - 25'**	**26' - 35'**	**36'-50'**	**50' +**
2001				
2003	0.00	1.00	1.36	2.68
2004	0.00	1.00	1.46	2.44
2005	0.00	1.00	1.35	2.26
2006	0.00	1.00	1.51	2.18
2007	0.00	1.00	1.68	2.10
2008	0.00	1.00	1.85	2.01
2009	0.00	1.00	1.85	2.01

Where data was unavailable green highlighted data points were interpolated based on other available data.
Note: In most cases, 2003-2008 rents given are the midpoint of MDR pricing survey data for each size category.

MDR Pricing Data

Parcel: **8 - Bay Club**

Number of Slips: **231**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	0	170	61	0	231
Year					
2003	$ -	$ 9.86	$ 12.27	$ -	
2004	$ -	$ 11.39	$ 12.27	$ -	
2005	$ -	$ 10.82	$ 10.82	$ -	
2006	$ -	$ 12.20	$ 11.94	$ -	
2007	$ -	$ 14.37	$ 16.51	$ -	
2008	$ -	$ 15.38	$ 17.14	$ -	
2009	$ -	$ 14.34	$ 17.10	$ -	
Period Change					
2003-2008	#DIV/0!	56.0%	39.7%	#DIV/0!	
2003-2009	#DIV/0!	45.4%	39.4%	#DIV/0!	
Annual Change					
2003-2008	#DIV/0!	11.2%	7.9%	#DIV/0!	
2003-2009	#DIV/0!	7.6%	6.6%	#DIV/0!	

Indexed Rates	12' - 25'	26' - 35'	36'-50'	50' +
2001				
2003	0.00	1.00	1.24	0.00
2004	0.00	1.00	1.08	0.00
2005	0.00	1.00	1.00	0.00
2006	0.00	1.00	0.98	0.00
2007	0.00	1.00	1.15	0.00
2008	0.00	1.00	1.11	0.00
2009	0.00	1.00	1.19	0.00

Where data was unavailable green highlighted data points were interpolated based on other available data.
Note: In most cases, 2003-2008 rents given are the midpoint of MDR pricing survey data for each size category.

MDR Pricing Data

Parcel: **10-Neptune**

Number of Slips: **184**

Slip Size	**12' - 25'**	**26' - 35'**	**36'-50'**	**50' +**	**Total**
Number of Slips	14	150	20	0	184
Year					
2003	$ 9.50	$ 10.25	$ 13.75	$ -	
2004	$ 9.50	$ 10.25	$ 13.75	$ -	
2005	$ 10.08	$ 10.18	$ 16.17	$ -	
2006	$ 10.08	$ 11.08	$ 11.42	$ -	
2007	$ 10.08	$ 10.89	$ 11.42	$ -	
2008	$ 10.70	$ 14.92	$ 10.67	$ -	
2009	$ 10.11	$ 10.89	$ 12.50	$ -	
Period Change					
2003-2008	12.6%	45.6%	N/A	#DIV/0!	
2003-2009	6.4%	6.2%	N/A	#DIV/0!	
Annual Change					
2003-2008	2.5%	9.1%	N/A	#DIV/0!	
2003-2009	1.1%	1.0%	N/A	#DIV/0!	

Indexed Rates	**12' - 25'**	**26' - 35'**	**36'-50'**	**50' +**
2001				
2003	0.93	1.00	1.34	0.00
2004	0.93	1.00	1.34	0.00
2005	0.99	1.00	1.59	0.00
2006	0.91	1.00	1.03	0.00
2007	0.93	1.00	1.05	0.00
2008	0.72	1.00	0.72	0.00
2009	0.93	1.00	1.15	0.00

Where data was unavailable green highlighted data points were interpolated based on other available data.

Note: In most cases, 2003-2008 rents given are the midpoint of MDR pricing survey data for each size category.

*Apparent anamoly in MDR data which does not significantly affect overall growth rate calculations.

MDR Pricing Data

Parcel: **13 - Villa del Mar**

Number of Slips: **186**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	0	33	145	8	186
Year					
2003	$ -	$ 12.00	$ 16.00	$ 17.00	
2004	$ -	$ 15.85	$ 17.73	$ 18.25	
2005	$ -	$ 12.50	$ 15.30	$ 16.90	
2006	$ -	$ 16.36	$ 17.27	$ 20.47	
2007	$ -	$ 15.00	$ 17.08	$ 21.63	
2008	$ -	$ 15.90	$ 18.21	$ 20.20	
2009	$ -	$ 17.55	$ 20.08	$ 23.58	
Period Change					
2003-2008	#DIV/0!	32.5%	13.8%	18.8%	
2003-2009	#DIV/0!	46.3%	25.5%	38.7%	
Annual Change					
2003-2008	#DIV/0!	6.5%	2.8%	3.8%	
2003-2009	#DIV/0!	7.7%	4.3%	6.5%	

Indexed Rates	12' - 25'	26' - 35'	36'-50'	50' +
2001				
2003	0.00	1.00	1.33	1.42
2004	0.00	1.00	1.12	1.15
2005	0.00	1.00	1.22	1.35
2006	0.00	1.00	1.06	1.25
2007	0.00	1.00	1.14	1.44
2008	0.00	1.00	1.15	1.27
2009	0.00	1.00	1.14	1.34

Where data was unavailable green highlighted data points were interpolated based on other available data.
Note: In most cases, 2003-2008 rents given are the midpoint of MDR pricing survey data for each size category.

MDR Pricing Data

Parcel: **15 - Bar Harbor / Espirit 2**

Number of Slips: **215**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	98	65	52	0	215
Year					
2003	$ 9.25	$ 9.13	$ 12.50	$ -	
2004	$ 8.38	$ 9.38	$ 13.38	$ -	
2005	$ 9.63	$ 10.63	$ 13.75	$ -	
2006	$ 10.38	$ 12.25	$ 15.38	$ -	
2007	$ 10.25	$ 12.75	$ 18.75	$ -	
2008	$ 11.38	$ 13.63	$ 17.38	$ -	
2009	$ -	$ -	$ -	$ -	*Parcel is currently under construction
Period Change					
2003-2008	23.0%	49.3%	39.0%	#DIV/0!	
2003-2009	N/A	N/A	N/A	#DIV/0!	
Annual Change					
2003-2008	4.6%	9.9%	7.8%	#DIV/0!	
2003-2009	N/A	N/A	N/A	#DIV/0!	

Indexed Rates	12' - 25'	26' - 35'	36'-50'	50' +
2001				
2003	1.01	1.00	1.37	0.00
2004	0.89	1.00	1.43	0.00
2005	0.91	1.00	1.29	0.00
2006	0.85	1.00	1.26	0.00
2007	0.80	1.00	1.47	0.00
2008	0.83	1.00	1.28	0.00
2009	#DIV/0!	1.00	#DIV/0!	#DIV/0!

Where data was unavailable green highlighted data points were interpolated based on other available data.
Note: In most cases, 2003-2008 rents given are the midpoint of MDR pricing survey data for each size category.

MDR Pricing Data

Parcel: **18 - Dolphin Marina**

Number of Slips: **424**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	200	107	83	34	424
Year					
2003	$ 9.88	$ 10.76	$ 12.26	$ 16.25	
2004	$ 9.88	$ 10.76	$ 11.76	$ 16.25	
2005	$ 9.88	$ 10.26	$ 12.26	$ 16.13	
2006	$ 12.43	$ 12.19	$ 15.74	$ 21.60	
2007	$ 17.67	$ 12.94	$ 16.68	$ 25.30	
2008	$ 14.01	$ 11.99	$ 15.83	$ 21.95	
2009	$ 12.76	$ 14.60	$ 20.29	$ 23.32	
Period Change					
2003-2008	41.8%	11.4%	29.1%	35.1%	
2003-2009	29.1%	35.7%	65.5%	43.5%	
Annual Change					
2003-2008	8.4%	2.3%	5.8%	7.0%	
2003-2009	4.9%	5.9%	10.9%	7.3%	

Indexed Rates	12' - 25'	26' - 35'	36'-50'	50' +
2001				
2003	0.92	1.00	1.14	1.51
2004	0.92	1.00	1.09	1.51
2005	0.96	1.00	1.19	1.57
2006	1.02	1.00	1.29	1.77
2007	1.37	1.00	1.29	1.96
2008	1.17	1.00	1.32	1.83
2009	0.87	1.00	1.39	1.60

Where data was unavailable green highlighted data points were interpolated based on other available data.
Note: In most cases, 2003-2008 rents given are the midpoint of MDR pricing survey data for each size category.

MDR Pricing Data

Parcel: **20 - Panay Way / Tradewinds Marina**

Number of Slips: **145**

Slip Size	**12' - 25'**	**26' - 35'**	**36'-50'**	**50' +**	**Total**
Number of Slips	54	73	18	0	145
Year					
2003	$ 9.88	$ 10.76	$ 12.26	$ -	
2004	$ 9.88	$ 10.76	$ 11.76	$ -	
2005	$ 9.88	$ 10.26	$ 12.26	$ -	
2006	$ 12.43	$ 12.19	$ 15.74	$ -	
2007	$ 12.43	$ 12.19	$ 15.74	$ -	
2008	$ 14.01	$ 11.99	$ 15.83	$ -	
2009	$ 12.76	$ 14.60	$ 20.29	$ -	
Period Change					
2003-2008	41.8%	11.4%	29.1%	#DIV/0!	
2003-2009	29.1%	35.7%	65.5%	#DIV/0!	
Annual Change					
2003-2008	8.4%	2.3%	5.8%	#DIV/0!	
2003-2009	4.9%	5.9%	10.9%	#DIV/0!	

*Reconfiguration said to be completed changing total slips from 145 to 149. However, the size of the 4 additional slips is unclear, and thus, are not counted here.

Indexed Rates	**12' - 25'**	**26' - 35'**	**36'-50'**	**50' +**
2001				
2003	0.92	1.00	1.14	0.00
2004	0.92	1.00	1.09	0.00
2005	0.96	1.00	1.19	0.00
2006	1.02	1.00	1.29	0.00
2007	1.02	1.00	1.29	0.00
2008	1.17	1.00	1.32	0.00
2009	0.87	1.00	1.39	0.00

Where data was unavailable green highlighted data points were interpolated based on other available data.
Note: In most cases, 2003-2008 rents given are the midpoint of MDR pricing survey data for each size category.

MDR Pricing Data

Parcel: **21 - Holiday Harbor**

Number of Slips: **183**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	122	50	11	0	183
Year					
2003	$ 9.88	$ 10.76	$ 12.26	$ -	
2004	$ 9.88	$ 10.76	$ 11.76	$ -	
2005	$ 9.88	$ 10.26	$ 12.26	$ -	
2006	$ 12.43	$ 12.19	$ 15.74	$ -	
2007	$ 12.43	$ 12.19	$ 15.74	$ -	
2008	$ 14.01	$ 11.99	$ 15.83	$ -	
2009	$ 12.76	$ 14.60	$ 20.29	$ -	
Period Change					
2003-2008	41.8%	11.4%	29.1%	#DIV/0!	
2003-2009	29.1%	35.7%	65.5%	#DIV/0!	
Annual Change					
2003-2008	8.4%	2.3%	5.8%	#DIV/0!	
2003-2009	4.9%	5.9%	10.9%	#DIV/0!	

Indexed Rates	12' - 25'	26' - 35'	36'-50'	50' +
2001				
2003	0.92	1.00	1.14	0.00
2004	0.92	1.00	1.09	0.00
2005	0.96	1.00	1.19	0.00
2006	1.02	1.00	1.29	0.00
2007	1.02	1.00	1.29	0.00
2008	1.17	1.00	1.32	0.00
2009	0.87	1.00	1.39	0.00

Where data was unavailable green highlighted data points were interpolated based on other available data.
Note: In most cases, 2003-2008 rents given are the midpoint of MDR pricing survey data for each size category.

MDR Pricing Data

Parcel: **28 - Mariner's Bay**

Number of Slips: **369**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	0	267	102	0	369
Year					
2003	$ -	$ 9.73	$ 12.68	$ -	
2004	$ -	$ 10.46	$ 12.82	$ -	
2005	$ -	$ 10.92	$ 13.25	$ -	
2006	$ -	$ 12.45	$ 16.75	$ -	
2007	$ -	$ 14.95	$ 17.99	$ -	
2008	$ -	$ 15.43	$ 19.03	$ -	
2009	$ -	$ 14.91	$ 18.56	$ -	
Period Change					
2003-2008	#DIV/0!	58.6%	50.1%	#DIV/0!	
2003-2009	#DIV/0!	53.2%	46.4%	#DIV/0!	
Annual Change					
2003-2008	#DIV/0!	11.7%	10.0%	#DIV/0!	
2003-2009	#DIV/0!	8.9%	7.7%	#DIV/0!	

Indexed Rates	12' - 25'	26' - 35'	36'-50'	50' +
2001				
2003	0.00	1.00	1.30	0.00
2004	0.00	1.00	1.23	0.00
2005	0.00	1.00	1.21	0.00
2006	0.00	1.00	1.35	0.00
2007	0.00	1.00	1.20	0.00
2008	0.00	1.00	1.23	0.00
2009	0.00	1.00	1.24	0.00

Where data was unavailable green highlighted data points were interpolated based on other available data.

Note: In most cases, 2003-2008 rents given are the midpoint of MDR pricing survey data for each size category.

MDR Pricing Data

Parcel: **111 - Marina Harbor**

Number of Slips: **112**

Slip Size	**12' - 25'**	**26' - 35'**	**36'-50'**	**50' +**	**Total**
Number of Slips	21	28	17	46	112
Year					
2003	$ 10.00	$ 12.50	$ 14.50	$ 20.00	
2004	$ 10.25	$ 11.50	$ 13.00	$ 21.75	
2005	$ 11.00	$ 11.75	$ 15.00	$ 21.25	
2006	$ 11.75	$ 13.25	$ 19.00	$ 26.50	*Reconfiguration completed changing total slips from 248 to 112.
2007	$ 11.75	$ 13.75	$ 19.50	$ 29.00	
2008	$ 12.25	$ 13.75	$ 19.50	$ 29.00	
2009	$ 13.50	$ 17.00	$ 22.50	$ 33.00	
Period Change					
2003-2008	22.5%	10.0%	34.5%	45.0%	
2003-2009	35.0%	36.0%	55.2%	65.0%	
Annual Change					
2003-2008	4.5%	2.0%	6.9%	9.0%	
2003-2009	5.8%	6.0%	9.2%	10.8%	

Indexed Rates	**12' - 25'**	**26' - 35'**	**36'-50'**	**50' +**
2001				
2003	0.80	1.00	1.16	1.60
2004	0.89	1.00	1.13	1.89
2005	0.94	1.00	1.28	1.81
2006	0.89	1.00	1.43	2.00
2007	0.85	1.00	1.42	2.11
2008	0.89	1.00	1.42	2.11
2009	0.79	1.00	1.32	1.94

Where data was unavailable green highlighted data points were interpolated based on other available data.

Note: In most cases, 2003-2008 rents given are the midpoint of MDR pricing survey data for each size category.

MDR Pricing Data

Parcel: **112 - Marina Harbor**

Number of Slips: **175**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	102	11	22	40	175
Year					
2003	$ 10.00	$ 12.50	$ 14.50	$ 20.00	
2004	$ 10.75	$ 12.00	$ 16.00	$ 21.25	*Reconfiguration completed changing total slips from 315 to 175.
2005	$ 11.00	$ 11.75	$ 15.00	$ 21.25	
2006	$ 11.75	$ 13.25	$ 19.00	$ 26.50	
2007	$ 11.75	$ 13.75	$ 19.50	$ 32.50	
2008	$ 11.75	$ 13.75	$ 19.50	$ 32.50	
2009	$ 13.50	$ 17.00	$ 22.50	$ 33.00	
Period Change					
2003-2008	17.5%	10.0%	34.5%	62.5%	
2003-2009	35.0%	36.0%	55.2%	65.0%	
Annual Change					
2003-2008	3.5%	2.0%	6.9%	12.5%	
2003-2009	5.8%	6.0%	9.2%	10.8%	

Indexed Rates	12' - 25'	26' - 35'	36'-50'	50' +
2001				
2003	0.80	1.00	1.16	1.60
2004	0.90	1.00	1.33	1.77
2005	0.94	1.00	1.28	1.81
2006	0.89	1.00	1.43	2.00
2007	0.85	1.00	1.42	2.36
2008	0.85	1.00	1.42	2.36
2009	0.79	1.00	1.32	1.94

Where data was unavailable green highlighted data points were interpolated based on other available data.

Note: In most cases, 2003-2008 rents given are the midpoint of MDR pricing survey data for each size category.

Adjacency Affected Slips

MDR Pricing Data

Parcel: **41 - Catalina Yacht Anchorage**

Number of Slips: **148**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	101	46	1	0	148
Year					
2003	$ 6.50	$ 7.50	$ 9.50	$ -	
2004	$ 6.50	$ 7.50	$ 9.50	$ -	
2005	$ 6.50	$ 7.50	$ 9.50	$ -	
2006	$ 7.00	$ 7.50	$ 9.50	$ -	
2007	$ 8.25	$ 9.50	$ 12.50	$ -	
2008	$ 8.85	$ 10.45	$ 11.45	$ -	
2009*	$ -	$ -	$ -	$ -	
Period Change					
2003-2008	36.2%	39.3%	20.5%	#DIV/0!	
2003-2009	N/A	N/A	N/A	#DIV/0!	
Annual Change					
2003-2008	7.2%	7.9%	4.1%	#DIV/0!	
2003-2009	N/A	N/A	N/A	#DIV/0!	

Indexed Rates	12' - 25'	26' - 35'	36'-50'	50' +
2001				
2003	0.87	1.00	1.27	0.00
2004	0.87	1.00	1.27	0.00
2005	0.87	1.00	1.27	0.00
2006	0.93	1.00	1.27	0.00
2007	0.87	1.00	1.32	0.00
2008	0.85	1.00	1.10	0.00
2009	#DIV/0!	1.00	#DIV/0!	#DIV/0!

Where data was unavailable green highlighted data points were interpolated based on other available data.

Note: In most cases, 2003-2008 rents given are the midpoint of MDR pricing survey data for each size category.

* 2009 data was not collected for adjacency affected marinas because study was focused on independent pricing trends

MDR Pricing Data

Parcel: **42/43 - MDR Hotel**

Number of Slips: **349**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	107	192	50	0	349
Year					
2003	$ 9.08	$ 9.97	$ 28.63	$ -	
2004	$ 11.38	$ 9.37	$ 28.63	$ -	
2005	$ 11.79	$ 9.97	$ 28.63	$ -	
2006	$ 12.11	$ 12.74	$ 15.54	$ -	
2007	$ 14.10	$ 15.40	$ 20.90	$ -	
2008	$ 15.69	$ 16.19	$ 21.20	$ -	
2009*	$ -	$ -	$ -	$ -	
Period Change					
2003-2008	72.8%	62.4%	N/A	#DIV/0!	
2003-2009	N/A	N/A	N/A	#DIV/0!	
Annual Change					
2003-2008	14.6%	12.5%	N/A	#DIV/0!	
2003-2009	N/A	N/A	N/A	#DIV/0!	

Indexed Rates	**12' - 25'**	**26' - 35'**	**36'-50'**	**50' +**
2001				
2003	0.91	1.00	2.87	0.00
2004	1.21	1.00	3.06	0.00
2005	1.18	1.00	2.87	0.00
2006	0.95	1.00	1.22	0.00
2007	0.92	1.00	1.36	0.00
2008	0.97	1.00	1.31	0.00
2009	#DIV/0!	1.00	#DIV/0!	#DIV/0!

Where data was unavailable green highlighted data points were interpolated based on other available data.
Note: In most cases, 2003-2008 rents given are the midpoint of MDR pricing survey data for each size category.
* 2009 data was not collected for adjacency affected marinas because study was focused on independent pricing trends

MDR Pricing Data

Parcel: **44 - Pier 44**

Number of Slips: **397**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	273	114	10	0	397
Year					
2003	$ 9.56	$ 11.88	$ 14.07	$ -	
2004	$ 11.56	$ 12.20	$ 16.00	$ -	
2005	$ 12.68	$ 13.24	$ 19.00	$ -	
2006	$ 11.89	$ 13.38	$ 16.00	$ -	
2007	$ 11.50	$ 16.00	$ 17.50	$ -	
2008	$ 11.50	$ 16.00	$ 21.00	$ -	
2009*	$ -	$ -	$ -	$ -	
Period Change					
2003-2008	20.3%	34.7%	49.3%	#DIV/0!	
2003-2009	N/A	N/A	N/A	#DIV/0!	
Annual Change					
2003-2008	4.1%	6.9%	9.9%	#DIV/0!	
2003-2009	N/A	N/A	N/A	#DIV/0!	

Indexed Rates	12' - 25'	26' - 35'	36'-50'	50' +
2001				
2003	0.80	1.00	1.18	0.00
2004	0.95	1.00	1.31	0.00
2005	0.96	1.00	1.44	0.00
2006	0.89	1.00	1.20	0.00
2007	0.72	1.00	1.09	0.00
2008	0.72	1.00	1.31	0.00
2009	#DIV/0!	1.00	#DIV/0!	#DIV/0!

Where data was unavailable green highlighted data points were interpolated based on other available data.

Note: In most cases, 2003-2008 rents given are the midpoint of MDR pricing survey data for each size category.

* 2009 data was not collected for adjacency affected marinas because study was focused on independent pricing trends

MDR Pricing Data

Parcel: **47 - SMYC**

Number of Slips: **173**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	56	109	8	0	173
Year					
2003	$ 6.50	$ 9.95	$ 12.71	$ -	
2004	$ 14.47	$ 10.24	$ 12.85	$ -	
2005	$ 6.29	$ 10.98	$ 13.78	$ -	
2006	$ 7.49	$ 10.98	$ 13.78	$ -	
2007	$ 8.12	$ 11.86	$ 16.06	$ -	
2008	$ 13.18	$ 14.08	$ 16.76	$ -	
2009*	$ -	$ -	$ -	$ -	
Period Change					
2003-2008	102.8%	41.5%	31.9%	#DIV/0!	
2003-2009	N/A	N/A	N/A	#DIV/0!	
Annual Change					
2003-2008	20.6%	8.3%	6.4%	#DIV/0!	
2003-2009	N/A	N/A	N/A	#DIV/0!	

Indexed Rates	**12' - 25'**	**26' - 35'**	**36'-50'**	**50' +**
2001				
2003	0.65	1.00	1.28	0.00
2004	1.41	1.00	1.25	0.00
2005	0.57	1.00	1.26	0.00
2006	0.68	1.00	1.26	0.00
2007	0.68	1.00	1.35	0.00
2008	0.94	1.00	1.19	0.00
2009	#DIV/0!	1.00	#DIV/0!	#DIV/0!

Where data was unavailable green highlighted data points were interpolated based on other available data.
Note: In most cases, 2003-2008 rents given are the midpoint of MDR pricing survey data for each size category.
* 2009 data was not collected for adjacency affected marinas because study was focused on independent pricing trends

MDR Pricing Data

Parcel: **53 - The Boatyard**

Number of Slips: **103**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	32	62	9	0	103
Year					
2003	$ 8.00	$ 11.00	$ 14.00	$ -	
2004	$ 8.00	$ 11.50	$ 15.00	$ -	
2005	$ 8.25	$ 12.00	$ 15.75	$ -	
2006	$ 10.75	$ 15.00	$ 19.51	$ -	
2007	$ 11.00	$ 14.50	$ 19.00	$ -	
2008	$ 11.75	$ 15.00	$ 19.25	$ -	
2009*	$ -	$ -	$ -	$ -	
Period Change					
2003-2008	46.9%	36.4%	37.5%	#DIV/0!	
2003-2009	N/A	N/A	N/A	#DIV/0!	
Annual Change					
2003-2008	9.4%	7.3%	7.5%	#DIV/0!	
2003-2009	N/A	N/A	N/A	#DIV/0!	

Indexed Rates	12' - 25'	26' - 35'	36'-50'	50' +
2001				
2003	0.73	1.00	1.27	0.00
2004	0.70	1.00	1.30	0.00
2005	0.69	1.00	1.31	0.00
2006	0.72	1.00	1.30	0.00
2007	0.76	1.00	1.31	0.00
2008	0.78	1.00	1.28	0.00
2009	#DIV/0!	1.00	#DIV/0!	#DIV/0!

Where data was unavailable green highlighted data points were interpolated based on other available data.
Note: In most cases, 2003-2008 rents given are the midpoint of MDR pricing survey data for each size category.
* 2009 data was not collected for adjacency affected marinas because study was focused on independent pricing trends

MDR Pricing Data

Parcel: **54 - Windward Yacht Club**

Number of Slips: 53

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	0	4	35	14	53
Year					
2003	$ -	$ 14.50	$ 16.00	$ 19.00	
2004	$ -	$ 10.00	$ 16.00	$ 19.00	
2005	$ -	$ 12.08	$ 17.33	$ 18.38	
2006	$ -	$ 12.25	$ 18.37	$ 21.15	
2007	$ -	$ 12.98	$ 18.88	$ 22.44	
2008	$ -	$ 13.52	$ 19.67	$ 23.35	
2009*	$ -	$ -	$ -	$ -	
Period Change					
2003-2008	#DIV/0!	N/A	22.9%	22.9%	
2003-2009	#DIV/0!	N/A	N/A	N/A	
Annual Change					
2003-2008	#DIV/0!	N/A	4.6%	4.6%	
2003-2009	#DIV/0!	N/A	N/A	N/A	

Indexed Rates	12' - 25'	26' - 35'	36'-50'	50' +
2001				
2003	0.00	1.00	1.10	1.31
2004	0.00	1.00	1.60	1.90
2005	0.00	1.00	1.43	1.52
2006	0.00	1.00	1.50	1.73
2007	0.00	1.00	1.45	1.73
2008	0.00	1.00	1.45	1.73
2009	#DIV/0!	1.00	#DIV/0!	#DIV/0!

Where data was unavailable green highlighted data points were interpolated based on other available data.
Note: In most cases, 2003-2008 rents given are the midpoint of MDR pricing survey data for each size category.
* 2009 data was not collected for adjacency affected marinas because study was focused on independent pricing trends

MDR Pricing Data

Parcel: **125 - Marina City**

Number of Slips: **316**

Slip Size	**12' - 25'**	**26' - 35'**	**36'-50'**	**50' +**	**Total**
Number of Slips	13	205	80	18	316
Year					
2003	$ 9.00	$ 9.81	$ 13.42	$ 15.06	
2004	$ 10.00	$ 10.72	$ 13.81	$ 16.54	
2005	$ 11.34	$ 12.80	$ 15.99	$ 18.26	
2006	$ 13.70	$ 14.27	$ 15.96	$ 22.47	
2007	$ 13.70	$ 14.68	$ 20.70	$ 26.87	
2008	$ 14.20	$ 16.32	$ 17.15	$ 36.00	
2009*	$ -	$ -	$ -	$ -	
Period Change					
2003-2008	57.8%	66.4%	27.8%	139.0%	
2003-2009	N/A	N/A	N/A	N/A	
Annual Change					
2003-2008	11.6%	13.3%	5.6%	27.8%	
2003-2009	N/A	N/A	N/A	N/A	

Indexed Rates	**12' - 25'**	**26' - 35'**	**36'-50'**	**50' +**
2001				
2003	0.92	1.00	1.37	1.54
2004	0.93	1.00	1.29	1.54
2005	0.89	1.00	1.25	1.43
2006	0.96	1.00	1.12	1.57
2007	0.93	1.00	1.41	1.83
2008	0.87	1.00	1.05	2.21
2009	#DIV/0!	1.00	#DIV/0!	#DIV/0!

Where data was unavailable green highlighted data points were interpolated based on other available data.
Note: In most cases, 2003-2008 rents given are the midpoint of MDR pricing survey data for each size category.
* 2009 data was not collected for adjacency affected marinas because study was focused on independent pricing trends

MDR Pricing Data

Parcel: **132 - California Yacht Club**

Number of Slips: **253**

Slip Size	**12' - 25'**	**26' - 35'**	**36'-50'**	**50' +**	**Total**
Number of Slips	25	72	143	13	253
Year					
2003	$ 9.15	$ 11.95	$ 15.70	$ 16.93	
2004	$ 9.15	$ 11.95	$ 15.70	$ 16.88	
2005	$ 9.60	$ 12.33	$ 16.28	$ 17.73	
2006	$ 10.50	$ 13.25	$ 17.60	$ 20.20	
2007	$ 11.45	$ 12.70	$ 18.60	$ 22.05	
2008	$ 12.95	$ 16.11	$ 21.95	$ 25.31	
2009*	$ -	$ -	$ -	$ -	
Period Change					
2003-2008	41.5%	34.8%	39.8%	49.5%	
2003-2009	N/A	N/A	N/A	N/A	
Annual Change					
2003-2008	8.3%	7.0%	8.0%	9.9%	
2003-2009	N/A	N/A	N/A	N/A	

Indexed Rates	**12' - 25'**	**26' - 35'**	**36'-50'**	**50' +**
2001				
2003	0.77	1.00	1.31	1.42
2004	0.77	1.00	1.31	1.41
2005	0.78	1.00	1.32	1.44
2006	0.79	1.00	1.33	1.52
2007	0.90	1.00	1.46	1.74
2008	0.80	1.00	1.36	1.57
2009	#DIV/0!	1.00	#DIV/0!	#DIV/0!

Where data was unavailable green highlighted data points were interpolated based on other available data.
Note: In most cases, 2003-2008 rents given are the midpoint of MDR pricing survey data for each size category.
* 2009 data was not collected for adjacency affected marinas because study was focused on independent pricing trends

MDR Pricing Data

**** Due to the fact that the recently completed Parcel 12 has still not achieved stabilized pricing (vacancy is currently over 60%), it is not included as a part of the summary data tables.**

Parcel: 12 - Esprit 1

Number of Slips: 216

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	0	30	111	75	216
Year					
2003	$ -	$ -	$ -	$ -	
2004	$ -	$ -	$ -	$ -	
2005	$ -	$ -	$ -	$ -	
2006	$ -	$ -	$ -	$ -	
2007	$ -	$ -	$ -	$ -	
2008	$ -	$ 20.75	$ 31.50	$ 44.75	*Reconfiguration completed changing total slips from 430 to 216.
2009	$ -	$ 19.00	$ 24.50	$ 36.00	
Period Change					
2003-2008	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
2003-2009	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
Annual Change					
2003-2008	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
2003-2009	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	

Indexed Rates	**12' - 25'**	**26' - 35'**	**36'-50'**	**50' +**
2001				
2003	#DIV/0!	1.00	#DIV/0!	#DIV/0!
2004	#DIV/0!	1.00	#DIV/0!	#DIV/0!
2005	#DIV/0!	1.00	#DIV/0!	#DIV/0!
2006	#DIV/0!	1.00	#DIV/0!	#DIV/0!
2007	#DIV/0!	1.00	#DIV/0!	#DIV/0!
2008	0.00	1.00	1.52	2.16
2009	0.00	1.00	1.29	1.89

Where data was unavailable green highlighted data points were interpolated based on other available data.
Note: In most cases, 2003-2008 rents given are the midpoint of MDR pricing survey data for each size category.

APPENDIX B: Slip Pricing and Patterns in Other SoCal Marinas

Version: SoCal - Slip Pricing Data 2009-3-4

TABLE OF CONTENTS

INVENTORY OF SOCAL MARINAS

Marinas	Location	Total	12' - 25'	26' - 35'	36'-50'	50' +
Marina Del Rey						
Independently Priced *		2,438	611	1,086	592	149
Adjacency Affected		1,792	607	804	336	45
Total MDR Slips		**4,230**	**1,218**	**1,890**	**928**	**194**
SoCal Marinas						
Alamitos	Long Beach	1,966	814	667	432	53
Cabrillo	LA / San Pedro	885	0	743	123	19
King Harbor	Redondo Beach	827	59	578	151	39
Port Royal	Redondo Beach	338	157	149	26	6
Dana Point	Dana Point	1,436	752	474	168	42
Dana West	Dana Point	981	288	511	160	22
Lido	Newport Beach	251	60	116	50	25
Lido Dry Stack	Newport Beach	230	77	77	76	0
Bayside	Newport Beach	101	40	28	6	27
Newport Dunes	Newport Beach	429	24	335	70	0
Channel Islands	Ventura	403	28	105	234	36
Anacapa	Ventura	438	134	158	99	47
Total Competitive Sample Slips		**8,285**	**2,433**	**3,941**	**1,595**	**316**

Note: Historical data was unavailable for Cabrillo, Lido Dry Stack and Newport Dunes marinas. As a result, these marinas are included in the 2009 comparison data only and are not included in the trend comparison tables or charts.
*** This analysis only compares the Independently Priced MDR Marinas to competitive SoCal marinas.**

SoCal Marina Pricing Data

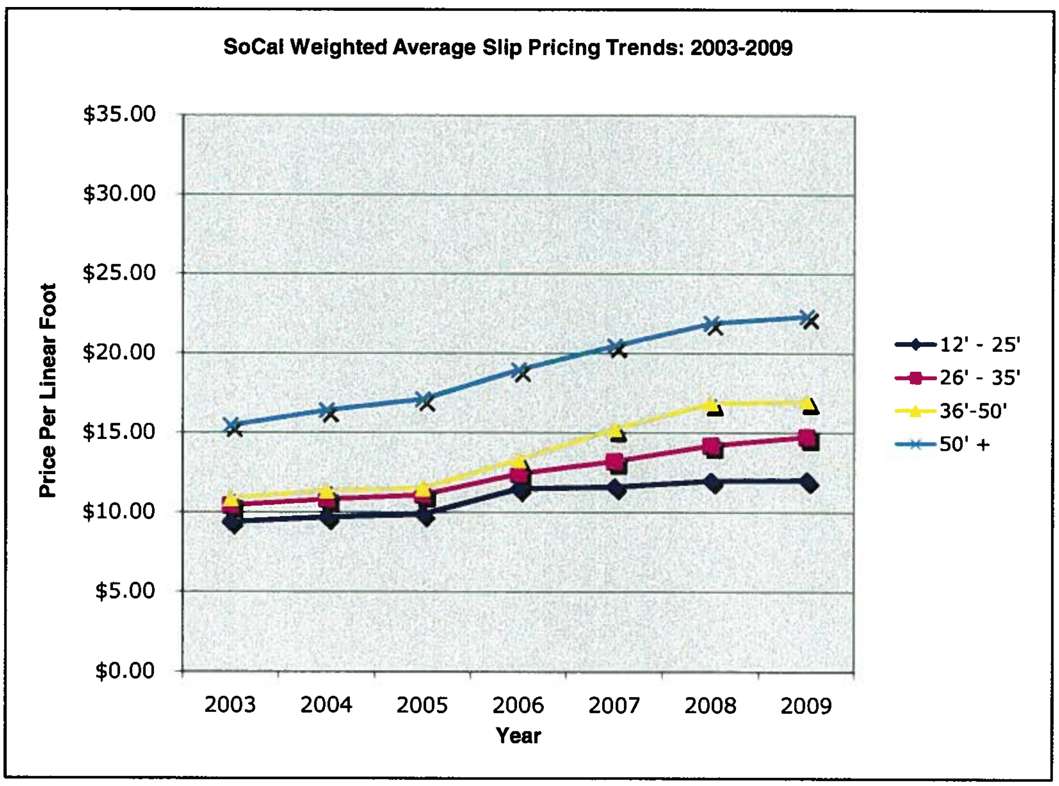
WEIGHTED AVERAGE OF SOCAL MARINA PRICING TRENDS BY SLIP SIZE

Number of Slips: 6,741

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	2,332	2,786	1,326	297	6,741
Assumed Midpoint (LF)	20.0	30.0	42.5	55.0	30.10
Year	**12' - 25'**	**26' - 35'**	**36'-50'**	**50' +**	
2003	$9.39	$10.44	$10.87	$15.46	$10.72
2004	$9.68	$10.83	$11.35	$16.40	$11.16
2005	$9.87	$11.11	$11.50	$17.09	$11.42
2006	$11.48	$12.43	$13.31	$18.95	$12.98
2007	$11.61	$13.22	$15.25	$20.48	$14.00
2008	$12.00	$14.22	$16.88	$21.92	$15.07
2009	$12.04	$14.76	$17.01	$22.34	$15.37
Period Change					
2003-2008	27.8%	36.2%	55.2%	41.8%	40.5%
2003-2009	28.2%	41.3%	56.4%	44.5%	43.3%
Annual Change					
2003-2008	5.6%	7.2%	11.0%	8.4%	8.1%
2003-2009	4.7%	6.9%	9.4%	7.4%	7.2%

Indexed Rates	**12' - 25'**	**26' - 35'**	**36'-50'**	**50' +**
2003	0.90	1.00	1.04	1.48
2004	0.89	1.00	1.05	1.51
2005	0.89	1.00	1.04	1.54
2006	0.92	1.00	1.07	1.52
2007	0.88	1.00	1.15	1.55
2008	0.84	1.00	1.19	1.54
2009	0.82	1.00	1.15	1.51

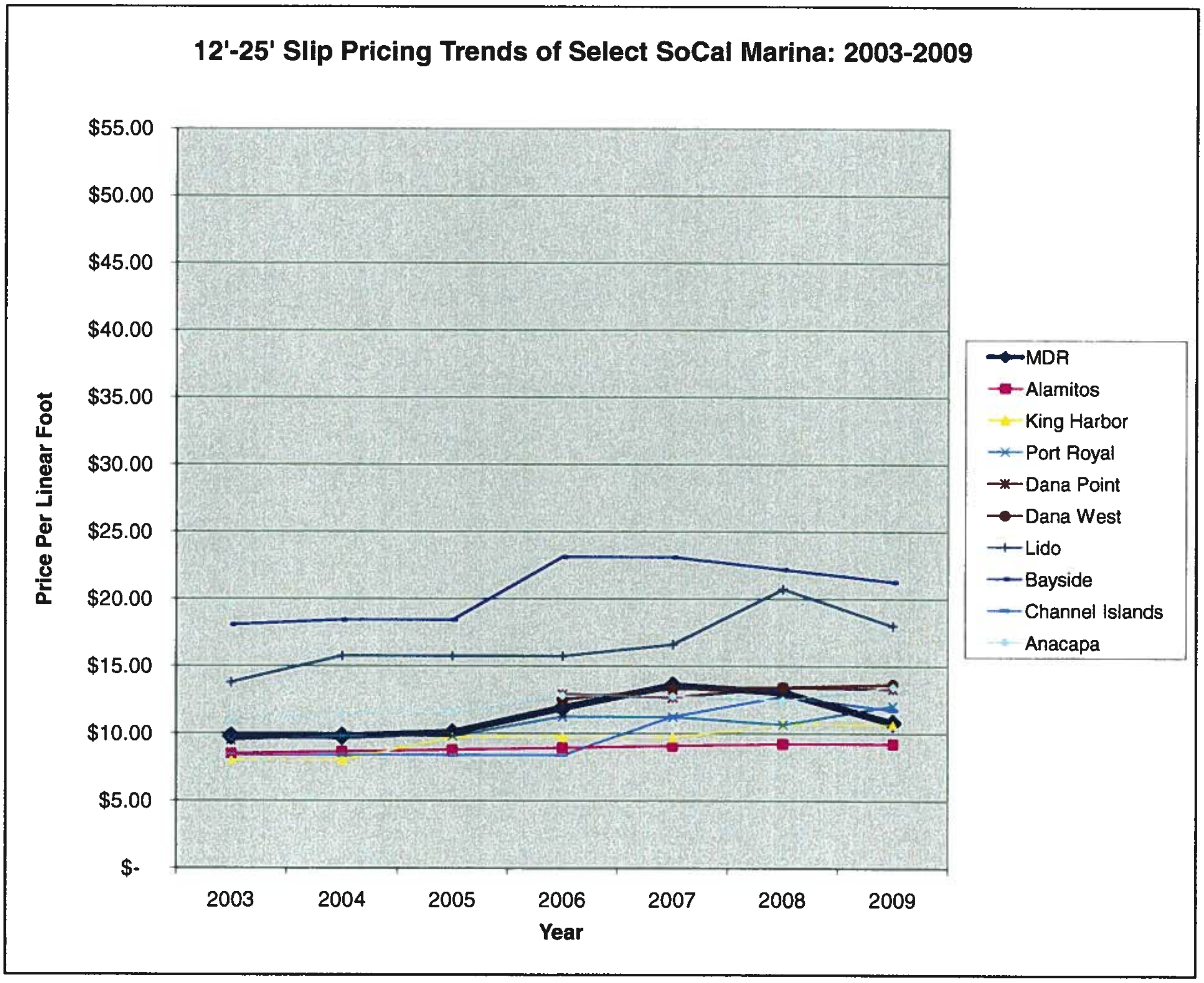
Note: In most cases, 2003-2008 rents given are the median of MDR pricing survey data for each size category.



SoCal Marina Pricing Data

COMPARISON OF MARINA PRICING TRENDS BY SLIP SIZE

Slip Size	12' - 25'										
Number of Slips	611	814	59	157	752	288	60	40	28	134	2,332
	MDR	Alamitos	King Harbor	Port Royal	Dana Point	Dana West	Lido	Bayside	Channel Islands	Anacapa	SOCAL WTD. AVE.
2003	$ 9.79	$ 8.50	$ 8.00	$ 9.50			$ 13.78	$ 18.07	$ 8.40	$ 10.92	$9.39
2004	$ 9.79	$ 8.65	$ 8.00	$ 9.80			$ 15.75	$ 18.43	$ 8.40	$ 11.52	$9.68
2005	$ 10.07	$ 8.80	$ 9.71	$ 9.80			$ 15.75	$ 18.43	$ 8.40	$ 11.64	$9.87
2006	$ 11.91	$ 8.95	$ 9.71	$ 11.25	$ 12.92	$ 12.53	$ 15.75	$ 23.13	$ 8.40	$ 12.80	$11.48
2007	$ 13.60	$ 9.10	$ 9.71	$ 11.25	$ 12.69	$ 13.34	$ 16.63	$ 23.13	$ 11.28	$ 12.80	$11.61
2008	$ 13.07	$ 9.25	$ 10.67	$ 10.67	$ 13.44	$ 13.44	$ 20.75	$ 22.21	$ 12.76	$ 12.48	$12.00
2009	$ 10.80	$ 9.25	$ 10.67	$ 12.06	$ 13.32	$ 13.65	$ 18.00	$ 21.28	$ 11.75	$ 13.48	$12.04
Period Change											
2003-2008	33.5%	8.8%	33.4%	12.3%	4.0%	7.3%	50.6%	22.9%	51.9%	14.3%	27.8%
2003-2009	10.3%	8.8%	33.4%	26.9%	3.1%	8.9%	30.6%	17.8%	39.9%	23.4%	28.2%
Annual Change											
2003-2008	6.7%	1.8%	6.7%	2.5%	0.8%	1.5%	10.1%	4.6%	10.4%	2.9%	5.6%
2003-2009	1.7%	1.5%	5.6%	4.5%	0.5%	1.5%	5.1%	3.0%	6.6%	3.9%	4.7%

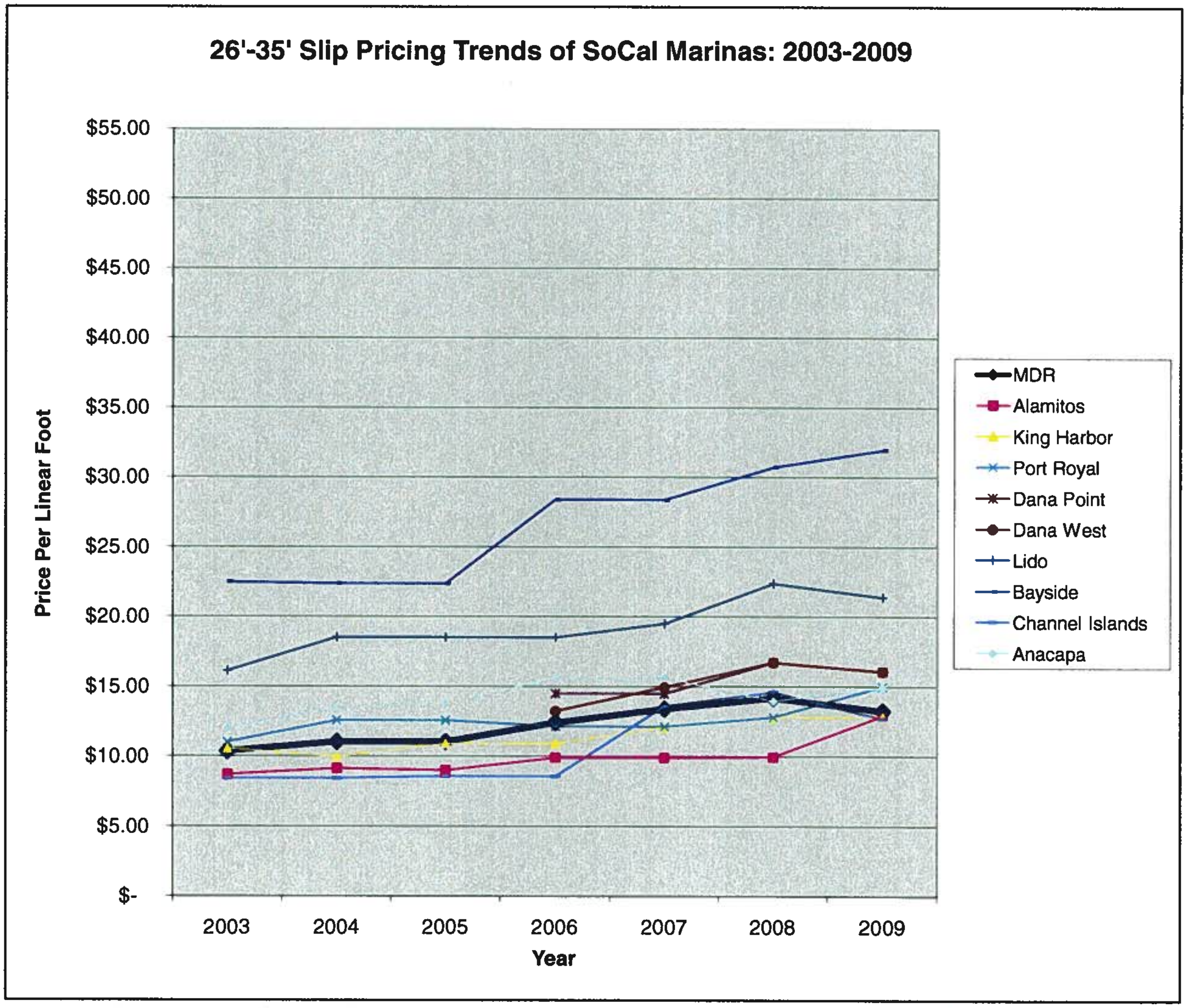


Note: MDR Pricing data are the weighted average of the Independently Priced Slips (Parcels 7,8,10,13,15,18,20,21,28,111/112).

SoCal Marina Pricing Data

COMPARISON OF MARINA PRICING TRENDS BY SLIP SIZE

Slip Size: 26' - 35'	MDR	Alamitos	King Harbor	Port Royal	Dana Point	Dana West	Lido	Bayside	Channel Islands	Anacapa	SOCAL WTD. AVE.
Number of Slips	1,086	667	578	149	474	511	116	28	105	158	2,786
2003	$ 10.35	$ 8.70	$ 10.54	$ 11.00			$ 16.10	$ 22.47	$ 8.40	$ 11.97	$10.44
2004	$ 11.02	$ 9.13	$ 9.95	$ 12.55			$ 18.50	$ 22.36	$ 8.40	$ 13.53	$10.83
2005	$ 11.02	$ 9.00	$ 10.89	$ 12.55			$ 18.50	$ 22.36	$ 8.56	$ 13.71	$11.11
2006	$ 12.40	$ 9.90	$ 10.89	$ 12.13	$ 14.48	$ 13.22	$ 18.50	$ 28.38	$ 8.56	$ 15.63	$12.43
2007	$ 13.39	$ 9.90	$ 12.06	$ 12.13	$ 14.48	$ 14.94	$ 19.50	$ 28.38	$ 13.61	$ 15.63	$13.22
2008	$ 14.17	$ 9.95	$ 12.80	$ 12.80	$ 16.72	$ 16.72	$ 22.38	$ 30.72	$ 14.60	$ 13.96	$14.22
2009	$ 13.23	$ 12.90	$ 12.80	$ 14.98	$ 16.06	$ 16.05	$ 21.38	$ 31.95	$ 12.68	$ 14.90	$14.76
Period Change											
2003-2008	37.0%	14.4%	21.4%	16.4%	15.5%	26.5%	39.0%	36.7%	73.8%	16.6%	36.2%
2003-2009	27.9%	48.3%	21.4%	36.2%	10.9%	21.4%	32.8%	42.2%	51.0%	24.5%	41.3%
Annual Change											
2003-2008	7.4%	2.9%	4.3%	3.3%	3.1%	5.3%	7.8%	7.3%	14.8%	3.3%	7.2%
2003-2009	4.6%	8.0%	3.6%	6.0%	1.8%	3.6%	5.5%	7.0%	8.5%	4.1%	6.9%



Note: MDR Pricing data are the weighted average of the Independently Priced Slips (Parcels 7,8,10,13,15,18,20,21,28,111/112).

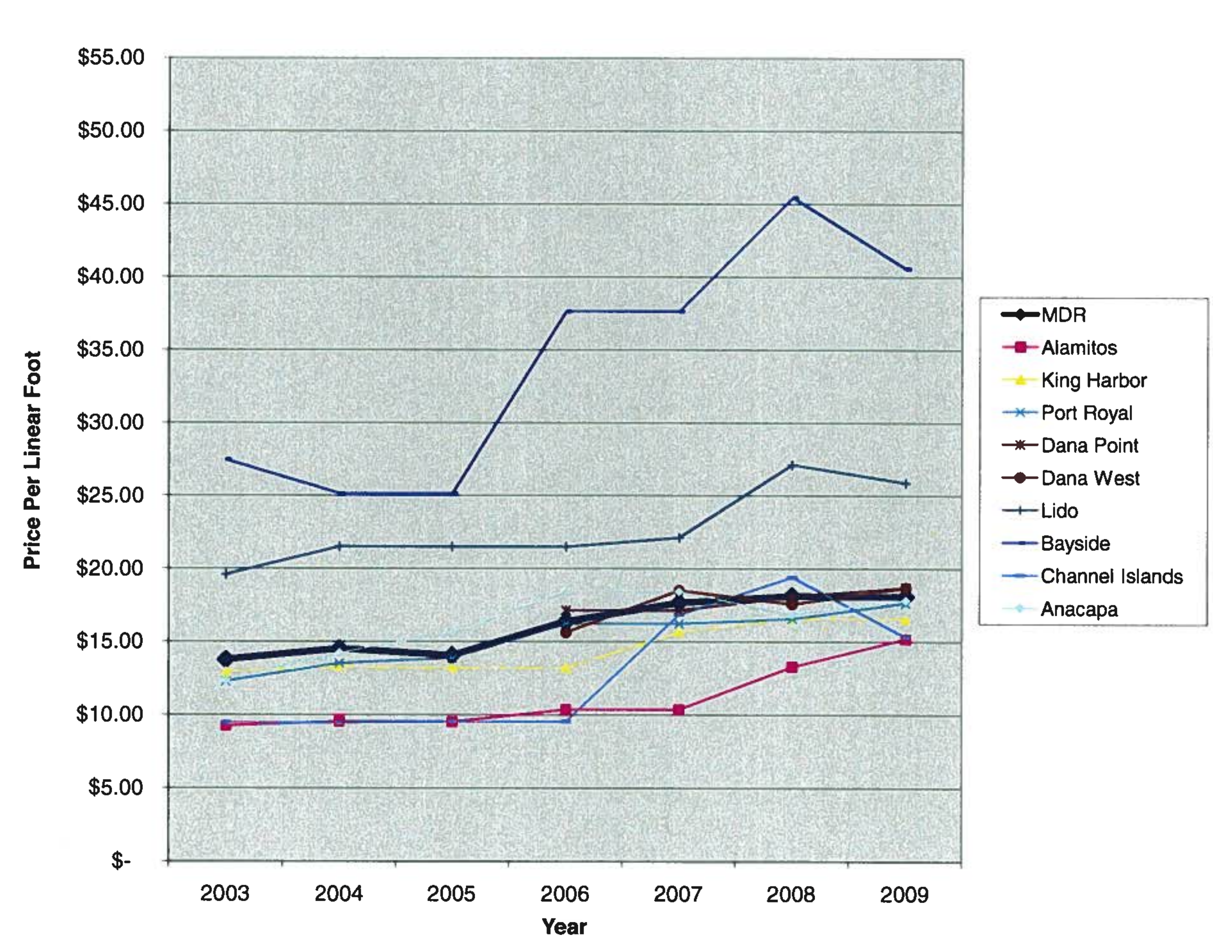
SoCal Marina Pricing Data

COMPARISON OF MARINA PRICING TRENDS BY SLIP SIZE

Slip Size **36'-50'**

	MDR	Alamitos	King Harbor	Port Royal	Dana Point	Dana West	Lido	Bayside	Channel Islands	Anacapa	SOCAL WTD. AVE.
Number of Slips	592	432	151	26	168	160	50	6	234	99	1,326
2003	$ 13.77	$ 9.25	$ 12.96	$ 12.28			$ 19.58	$ 27.45	$ 9.45	$ 12.38	$10.87
2004	$ 14.51	$ 9.55	$ 13.28	$ 13.50			$ 21.50	$ 25.13	$ 9.45	$ 14.24	$11.35
2005	$ 14.07	$ 9.53	$ 13.21	$ 13.88			$ 21.50	$ 25.13	$ 9.55	$ 15.64	$11.50
2006	$ 16.38	$ 10.38	$ 13.21	$ 16.25	$ 17.15	$ 15.63	$ 21.50	$ 37.63	$ 9.55	$ 18.44	$13.31
2007	$ 17.68	$ 10.38	$ 15.64	$ 16.25	$ 17.15	$ 18.52	$ 22.13	$ 37.63	$ 16.87	$ 18.44	$15.25
2008	$ 18.14	$ 13.30	$ 16.58	$ 16.58	$ 18.09	$ 17.60	$ 27.13	$ 45.44	$ 19.43	$ 16.89	$16.88
2009	$ 18.09	$ 15.19	$ 16.58	$ 17.65	$ 18.69	$ 18.69	$ 25.88	$ 40.56	$ 15.34	$ 17.85	$17.01
Period Change											
2003-2008	31.8%	43.8%	27.9%	35.0%	5.5%	12.6%	38.6%	65.5%	105.6%	36.4%	55.2%
2003-2009	31.4%	64.2%	27.9%	43.7%	9.0%	19.6%	32.2%	47.8%	62.3%	44.2%	56.4%
Annual Change											
2003-2008	6.4%	8.8%	5.6%	7.0%	1.1%	2.5%	7.7%	13.1%	21.1%	7.3%	11.0%
2003-2009	5.2%	10.7%	4.7%	7.3%	1.5%	3.3%	5.4%	8.0%	10.4%	7.4%	9.4%

36'-50' Slip Pricing Trends of Select SoCal Marinas: 2003-2009



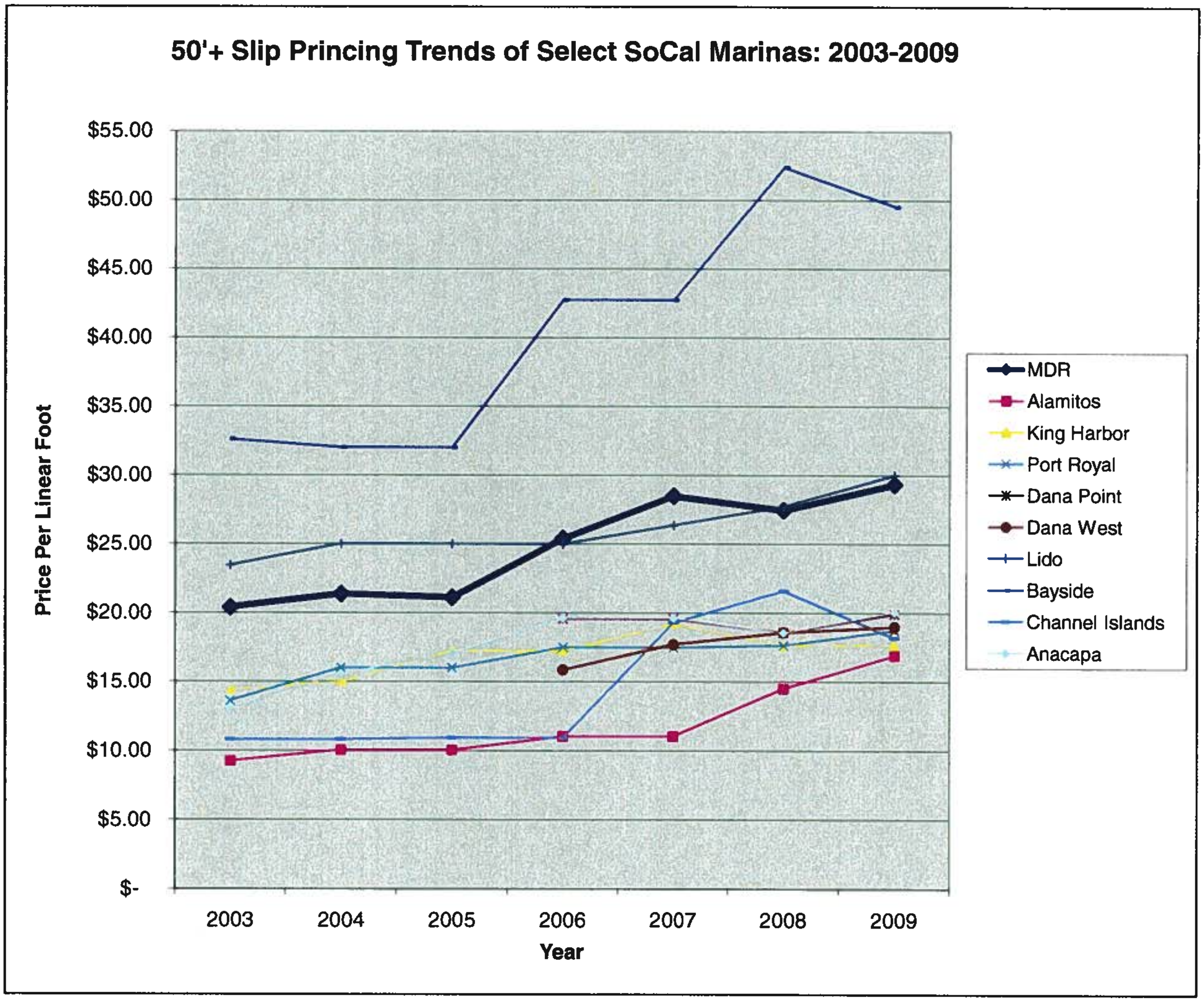
Note: MDR Pricing data are the weighted average of the Independently Priced Slips (Parcels 7,8,10,13,15,18,20,21,28,111/112).

SoCal Marina Pricing Data

COMPARISON OF MARINA PRICING TRENDS BY SLIP SIZE

Slip Size **50'+**

	MDR	Alamitos	King Harbor	Port Royal	Dana Point	Dana West	Lido	Bayside	Channel Islands	Anacapa	SOCAL WTD. AVE.
Number of Slips	149	53	39	6	42	22	25	27	36	47	297
2003	$ 20.39	$ 9.25	$ 14.39	$ 13.60			$ 23.44	$ 32.60	$ 10.81	$ 13.04	$15.46
2004	$ 21.36	$ 10.05	$ 14.95	$ 16.00			$ 25.00	$ 32.00	$ 10.81	$ 15.56	$16.40
2005	$ 21.10	$ 10.05	$ 17.23	$ 16.00			$ 25.00	$ 32.00	$ 10.93	$ 17.02	$17.09
2006	$ 25.38	$ 11.05	$ 17.23	$ 17.50	$ 19.57	$ 15.86	$ 25.00	$ 42.75	$ 10.93	$ 19.63	$18.95
2007	$ 28.48	$ 11.05	$ 19.20	$ 17.50	$ 19.57	$ 17.72	$ 26.38	$ 42.75	$ 19.30	$ 19.63	$20.48
2008	$ 27.45	$ 14.50	$ 17.65	$ 17.65	$ 18.58	$ 18.58	$ 27.75	$ 52.40	$ 21.60	$ 18.56	$21.92
2009	$ 29.32	$ 16.90	$ 17.65	$ 18.73	$ 19.92	$ 18.98	$ 30.00	$ 49.53	$ 18.18	$ 20.05	$22.34
Period Change											
2003-2008	34.7%	56.8%	22.7%	29.8%	-5.1%	17.2%	18.4%	60.7%	99.8%	42.3%	41.8%
2003-2009	43.8%	82.7%	22.7%	37.7%	1.8%	19.7%	28.0%	51.9%	68.2%	53.8%	44.5%
Annual Change											
2003-2008	6.9%	11.4%	4.5%	6.0%	-1.0%	3.4%	3.7%	12.1%	20.0%	8.5%	8.4%
2003-2009	7.3%	13.8%	3.8%	6.3%	0.3%	3.3%	4.7%	8.7%	11.4%	9.0%	7.4%

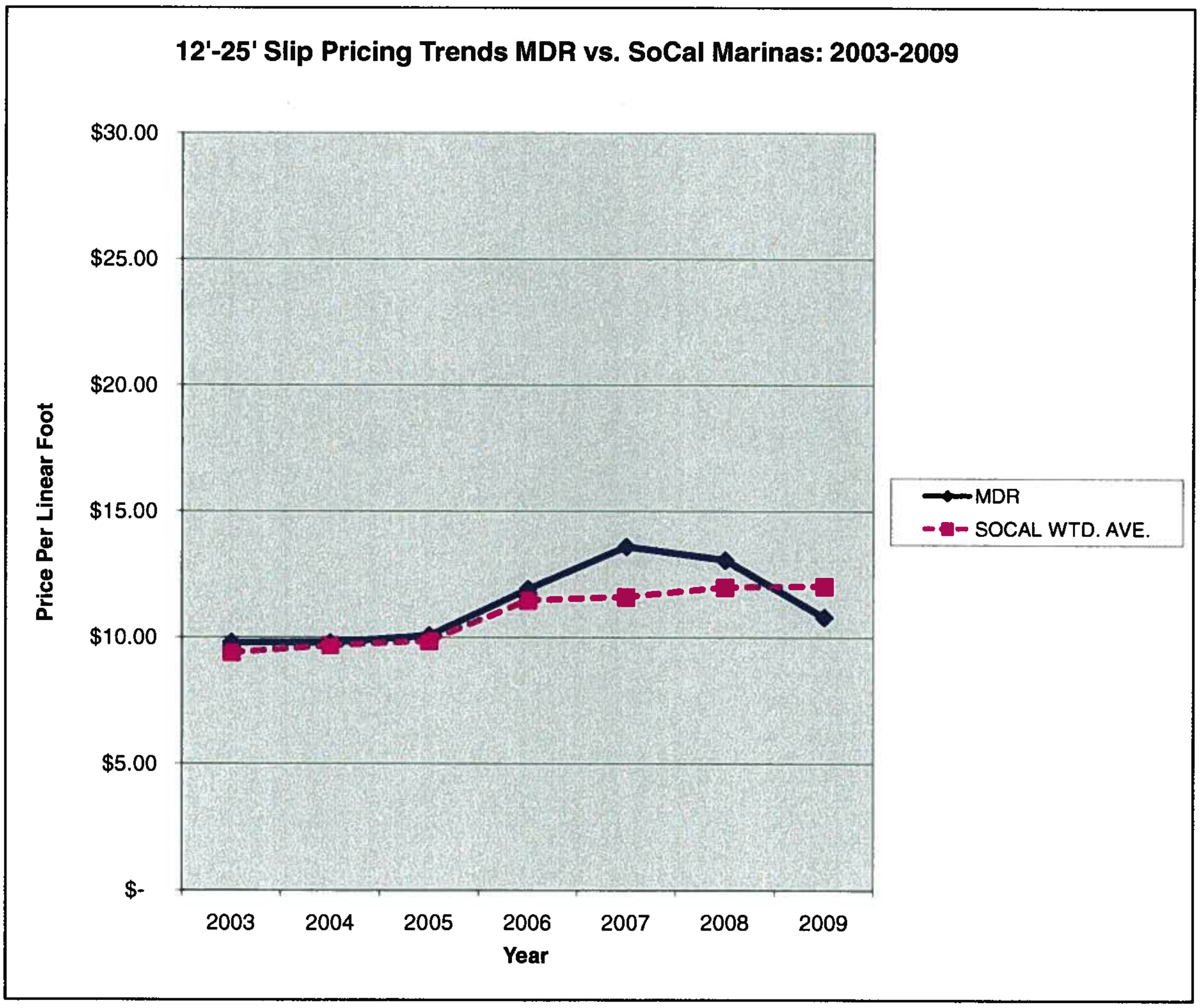


Note: MDR Pricing data are the weighted average of the Independently Priced Slips (Parcels 7,8,10,13,15,18,20,21,28,111/112).

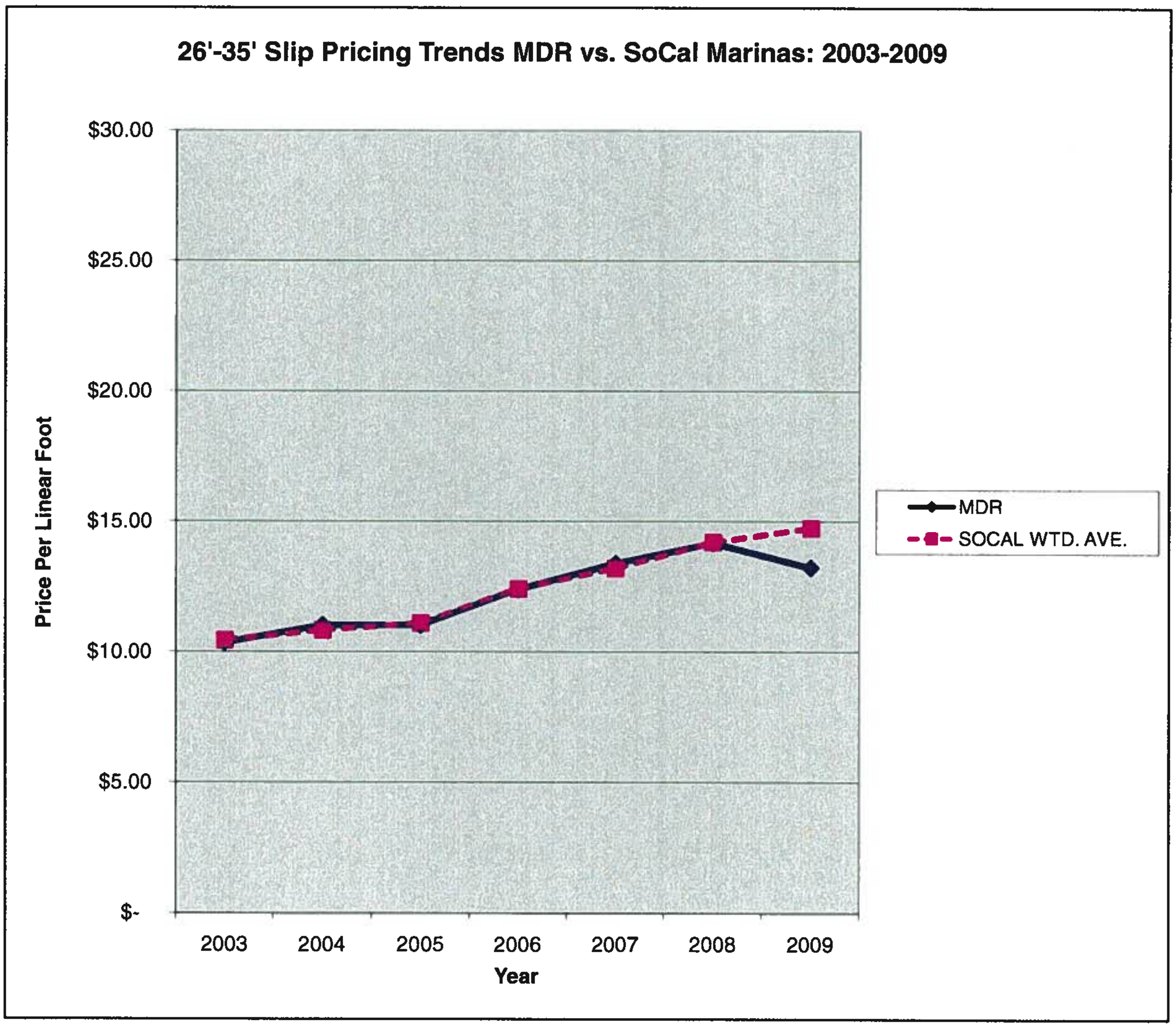
SoCal Marina Pricing Data

COMPARISON OF MARINA PRICING TRENDS BY SLIP SIZE: MDR VS. SOCAL WEIGHTED AVERAGE

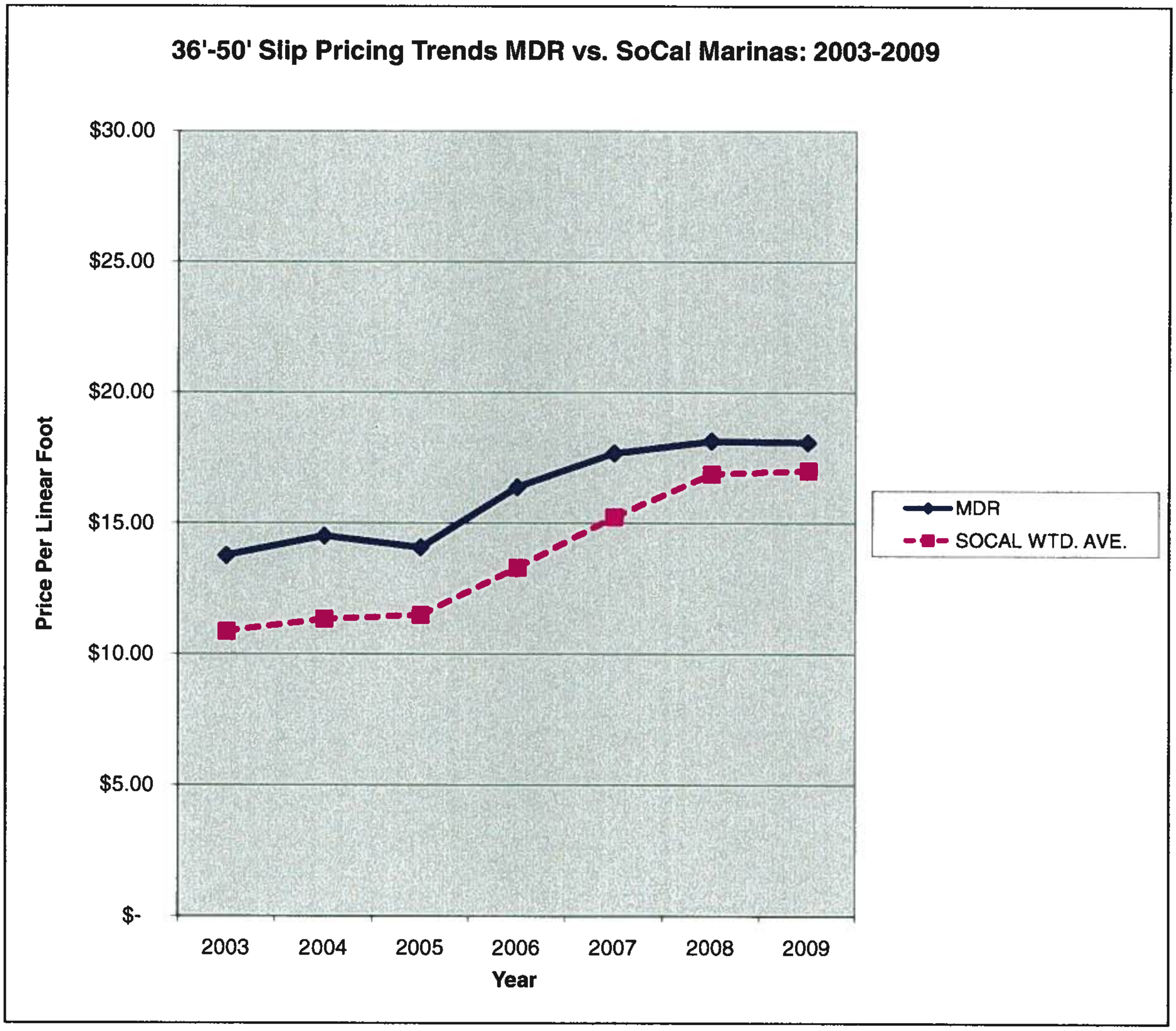
Slip Size	**12' - 25'**	
Number of Slips	611	2,332
	MDR	SOCAL WTD. AVE.
2003	$ 9.79	$9.39
2004	$ 9.79	$9.68
2005	$ 10.07	$9.87
2006	$ 11.91	$11.48
2007	$ 13.60	$11.61
2008	$ 13.07	$12.00
2009	$ 10.80	$12.04
Period Change		
2003-2008	33.5%	27.8%
2003-2009	10.3%	28.2%
Annual Change		
2003-2008	6.7%	5.6%
2003-2009	1.7%	4.7%



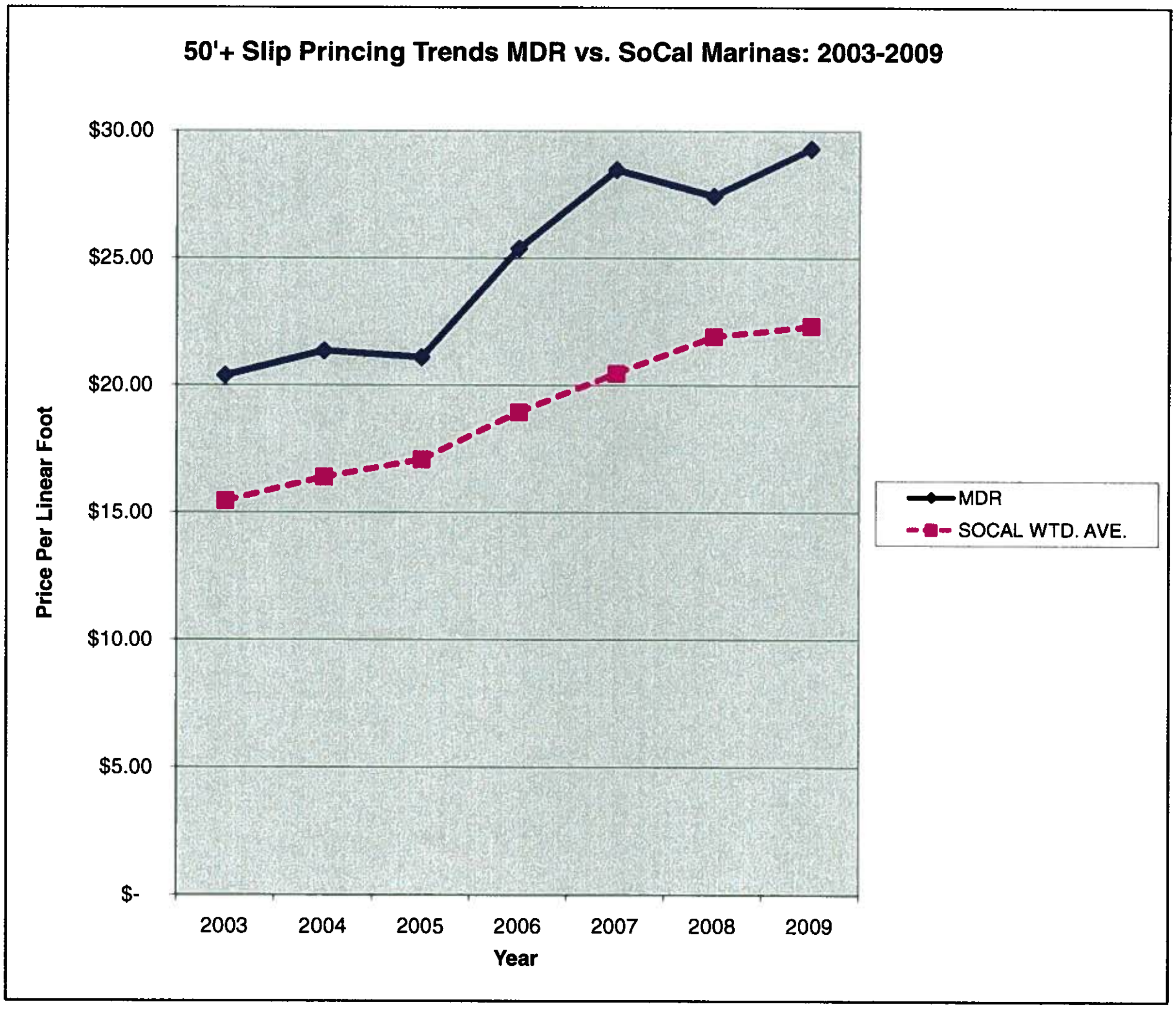
Slip Size	**26' - 35'**	
Number of Slips	1,086	2,786
	MDR	SOCAL WTD. AVE.
2003	$ 10.35	$10.44
2004	$ 11.02	$10.83
2005	$ 11.02	$11.11
2006	$ 12.40	$12.43
2007	$ 13.39	$13.22
2008	$ 14.17	$14.22
2009	$ 13.23	$14.76
Period Change		
2003-2008	37.0%	36.2%
2003-2009	27.9%	41.3%
Annual Change		
2003-2008	7.4%	7.2%
2003-2009	4.6%	6.9%



Slip Size	**36'-50'**	
Number of Slips	592	1,326
	MDR	**SOCAL WTD. AVE.**
2003	$ 13.77	$10.87
2004	$ 14.51	$11.35
2005	$ 14.07	$11.50
2006	$ 16.38	$13.31
2007	$ 17.68	$15.25
2008	$ 18.14	$16.88
2009	$ 18.09	$17.01
Period Change		
2003-2008	31.8%	55.2%
2003-2009	31.4%	56.4%
Annual Change		
2003-2008	6.4%	11.0%
2003-2009	5.2%	9.4%



Slip Size	50'+	
Number of Slips	149	297
	MDR	SOCAL WTD. AVE.
2003	$ 20.39	$15.46
2004	$ 21.36	$16.40
2005	$ 21.10	$17.09
2006	$ 25.38	$18.95
2007	$ 28.48	$20.48
2008	$ 27.45	$21.92
2009	$ 29.32	$22.34
Period Change		
2003-2008	34.7%	41.8%
2003-2009	43.8%	44.5%
Annual Change		
2003-2008	6.9%	8.4%
2003-2009	7.3%	7.4%

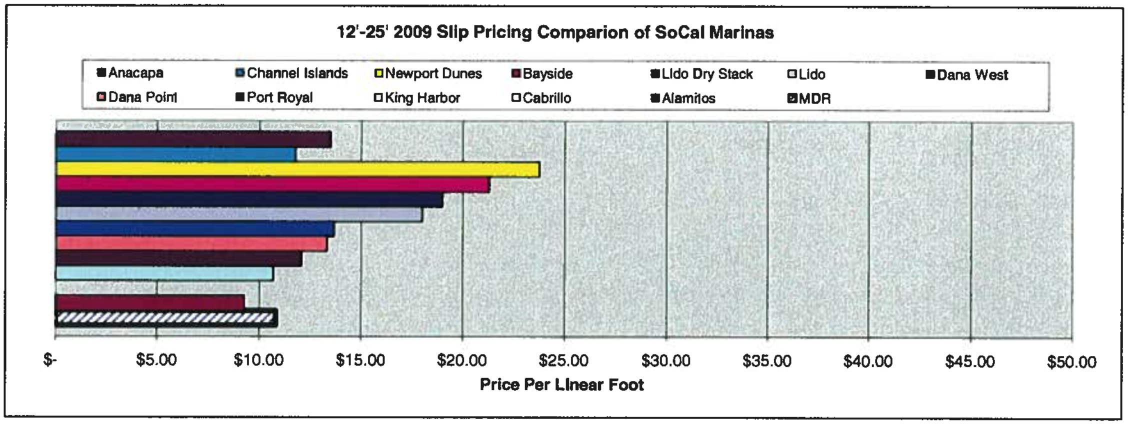


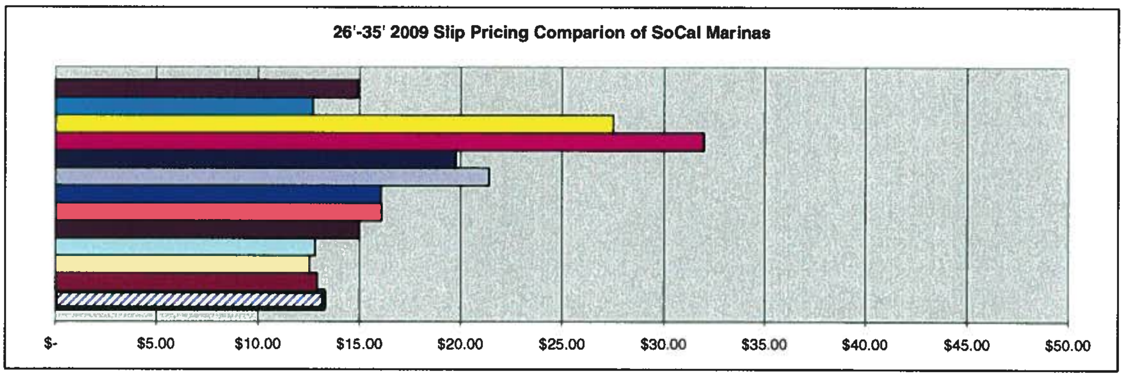
SoCal Marina Pricing Data

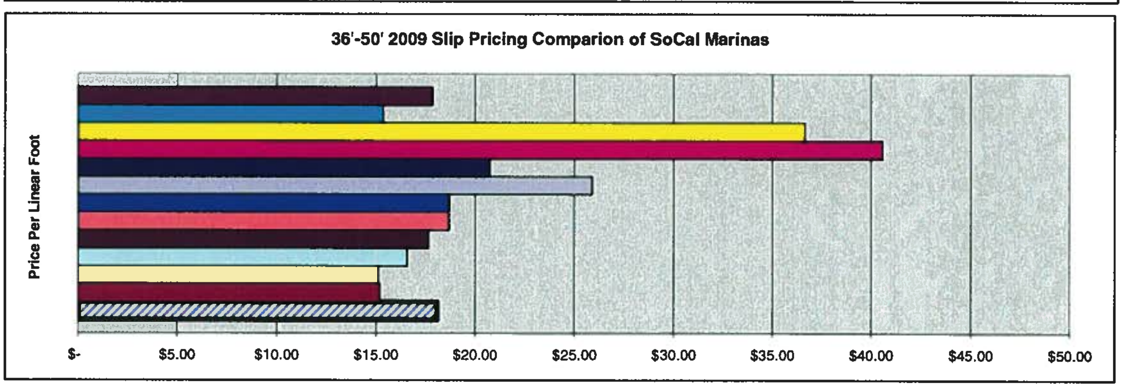
COMPARISON OF 2009 MARINA PRICING BY SLIP SIZE

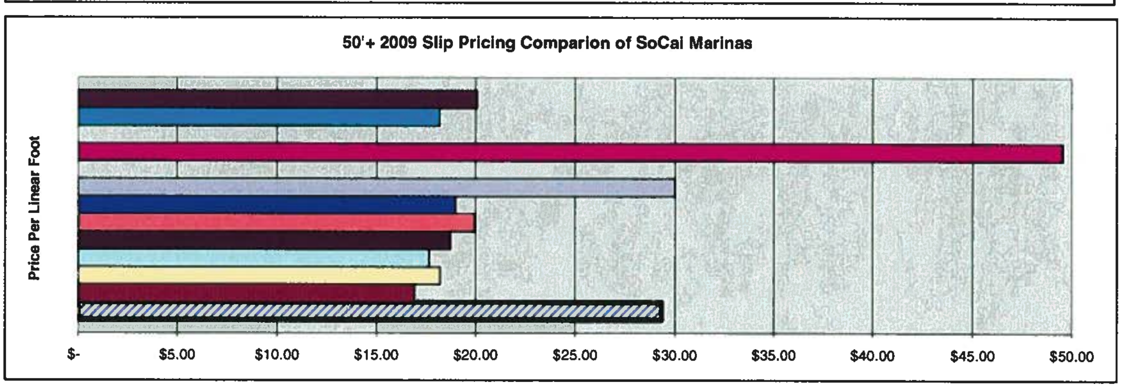
Number of Slips	MDR	Alamitos	Cabrillo	King Harbor	Port Royal	Dana Point	Dana West	Lido	Lido Dry Stack	Bayside	Newport Dunes	Channel Islands	Anacapa
12' - 25'	611	814	0	59	157	752	288	60	77	40	45	28	134
26' - 35'	1,086	667	743	578	149	474	511	116	77	28	335	105	158
36' - 50'	592	432	123	151	26	168	160	50	76	6	70	234	99
50'+	149	53	19	39	6	42	22	25	0	27	0	36	47

Slip Pricing	MDR	Alamitos	Cabrillo	King Harbor	Port Royal	Dana Point	Dana West	Lido	Lido Dry Stack	Bayside	Newport Dunes	Channel Islands	Anacapa
12' - 25'	$ 10.80	$ 9.25	$ -	$ 10.67	$ 12.06	$ 13.32	$ 13.65	$ 18.00	$ 19.00	$ 21.28	$ 23.75	$ 11.75	$ 13.48
26' - 35'	$ 13.23	$ 12.90	$ 12.53	$ 12.80	$ 14.98	$ 16.06	$ 16.05	$ 21.38	$ 19.75	$ 31.95	$ 27.50	$ 12.68	$ 14.90
36' - 50'	$ 18.09	$ 15.19	$ 15.11	$ 16.58	$ 17.65	$ 18.69	$ 18.69	$ 25.88	$ 20.75	$ 40.56	$ 36.63	$ 15.34	$ 17.85
50'+	$ 29.32	$ 16.90	$ 18.21	$ 17.65	$ 18.73	$ 19.92	$ 18.98	$ 30.00	$ -	$ 49.53	$ -	$ 18.18	$ 20.05









SoCal Marina Pricing Data

Marina: **Alamitos Bay Marina (Long Beach)**

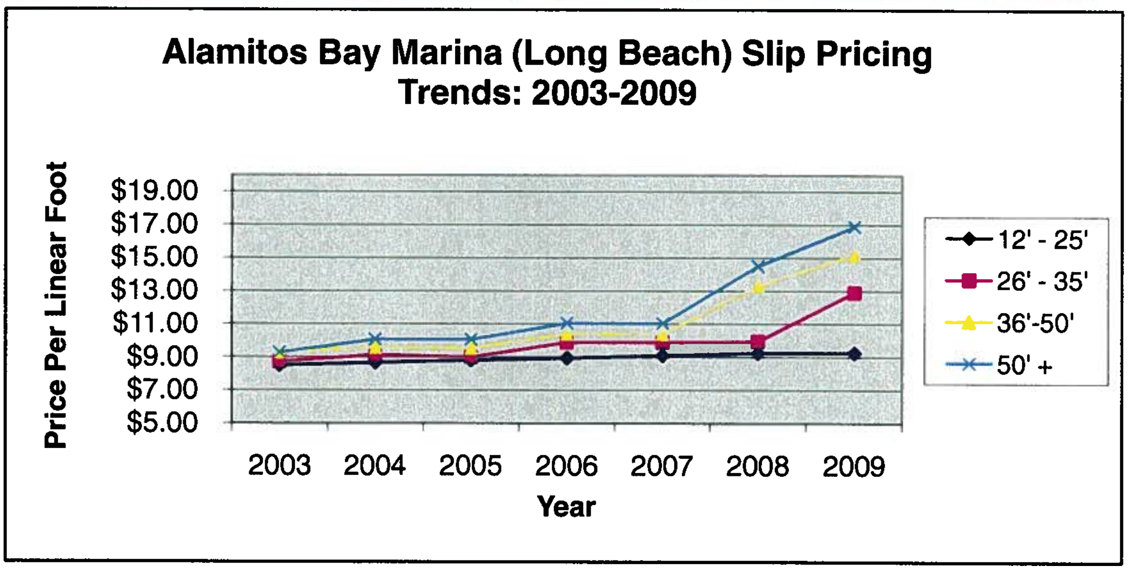
Number of Slips: **1,966** 1569

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	814	667	432	53	1,966

	12' - 25'	26' - 35'	36'-50'	50' +
2003	$ 8.50	$ 8.70	$ 9.25	$ 9.25
2004	$ 8.65	$ 9.13	$ 9.55	$ 10.05
2005	$ 8.80	$ 9.00	$ 9.53	$ 10.05
2006	$ 8.95	$ 9.90	$ 10.38	$ 11.05
2007	$ 9.10	$ 9.90	$ 10.38	$ 11.05
2008	$ 9.25	$ 9.95	$ 13.30	$ 14.50
2009	$ 9.25	$ 12.90	$ 15.19	$ 16.90
Period Change				
2003-2008	8.8%	14.4%	43.8%	56.8%
2003-2009	8.8%	48.3%	64.2%	82.7%
Annual Change				
2003-2008	1.8%	2.9%	8.8%	11.4%
2003-2009	1.5%	8.0%	10.7%	13.8%

Indexed Rates	12' - 25'	26' - 35'	36'-50'	50' +
2001				
2003	0.98	1.00	1.06	1.06
2004	0.95	1.00	1.05	1.10
2005	0.98	1.00	1.06	1.12
2006	0.90	1.00	1.05	1.12
2007	0.92	1.00	1.05	1.12
2008	0.93	1.00	1.34	1.46
2009	0.72	1.00	1.18	1.31

Note: In most cases, 2003-2008 rents given are the median of MDR pricing survey data for each size category. Where data was unavailable green highlighted data points were interpolated based on other available data.



SoCal Marina Pricing Data

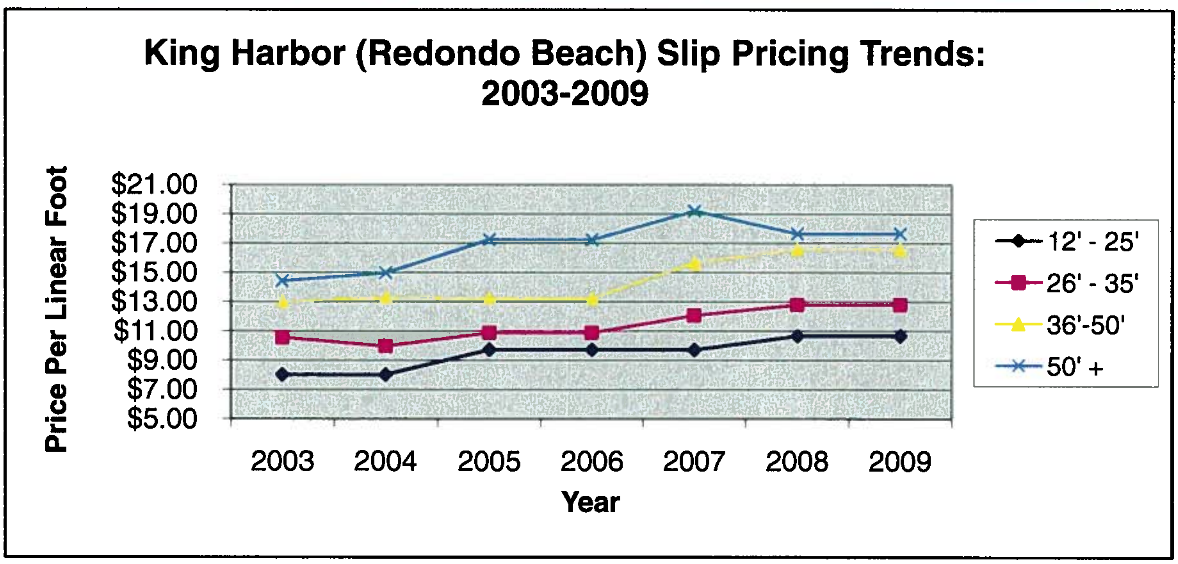
Marina: **King Harbor (Redondo Beach)**

Number of Slips: **827**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	59	578	151	39	827
	12' - 25'	26' - 35'	36'-50'	50' +	
2003	$ 8.00	$ 10.54	$ 12.96	$ 14.39	
2004	$ 8.00	$ 9.95	$ 13.28	$ 14.95	
2005	$ 9.71	$ 10.89	$ 13.21	$ 17.23	
2006	$ 9.71	$ 10.89	$ 13.21	$ 17.23	
2007	$ 9.71	$ 12.06	$ 15.64	$ 19.20	
2008	$ 10.67	$ 12.80	$ 16.58	$ 17.65	
2009	$ 10.67	$ 12.80	$ 16.58	$ 17.65	
Period Change					
2003-2008	33.4%	21.4%	27.9%	22.7%	
2003-2009	33.4%	21.4%	27.9%	22.7%	
Annual Change					
2003-2008	6.7%	4.3%	5.6%	4.5%	
2003-2009	5.6%	3.6%	4.7%	3.8%	

Indexed Rates	12' - 25'	26' - 35'	36'-50'	50' +
2001				
2003	0.76	1.00	1.23	1.37
2004	0.80	1.00	1.33	1.50
2005	0.89	1.00	1.21	1.58
2006	0.89	1.00	1.21	1.58
2007	0.81	1.00	1.30	1.59
2008	0.83	1.00	1.30	1.38
2009	0.83	1.00	1.30	1.38

Note: In most cases, 2003-2008 rents given are the median of MDR pricing survey data for each size category.
Where data was unavailable green highlighted data points were interpolated based on other available data.



SoCal Marina Pricing Data

Marina: **Port Royal (Redondo Beach)**

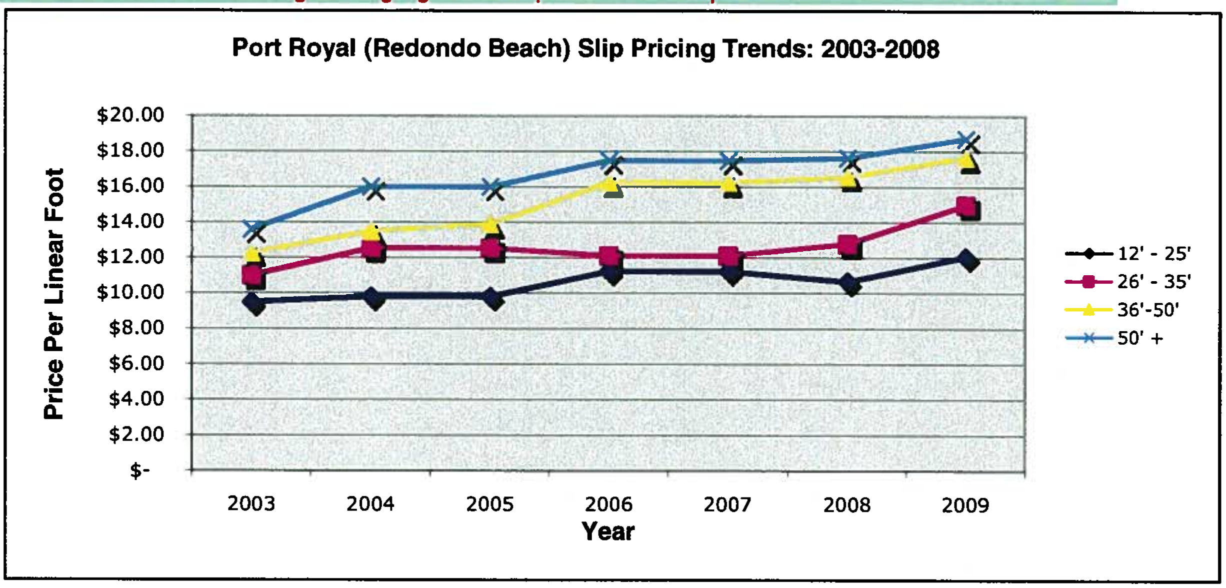
Number of Slips: **338**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	157	149	26	6	338

	12' - 25'	26' - 35'	36'-50'	50' +
2003	$ 9.50	$ 11.00	$ 12.28	$ 13.60
2004	$ 9.80	$ 12.55	$ 13.50	$ 16.00
2005	$ 9.80	$ 12.55	$ 13.88	$ 16.00
2006	$ 11.25	$ 12.13	$ 16.25	$ 17.50
2007	$ 11.25	$ 12.13	$ 16.25	$ 17.50
2008	$ 10.67	$ 12.80	$ 16.58	$ 17.65
2009	$ 12.06	$ 14.98	$ 17.65	$ 18.73
Period Change				
2003-2008	12.3%	16.4%	35.0%	29.8%
2003-2009	26.9%	36.2%	43.7%	37.7%
Annual Change				
2003-2008	2.5%	3.3%	7.0%	6.0%
2003-2009	4.5%	6.0%	7.3%	6.3%

Indexed Rates	12' - 25'	26' - 35'	36'-50'	50' +
2001				
2003	0.86	1.00	1.12	1.24
2004	0.78	1.00	1.08	1.27
2005	0.78	1.00	1.11	1.27
2006	0.93	1.00	1.34	1.44
2007	0.93	1.00	1.34	1.44
2008	0.83	1.00	1.30	1.38
2009	0.81	1.00	1.18	1.25

Note: In most cases, 2003-2008 rents given are the median of MDR pricing survey data for each size category. Where data was unavailable green highlighted data points were interpolated based on other available data.



SoCal Marina Pricing Data

Marina: **Dana Point**

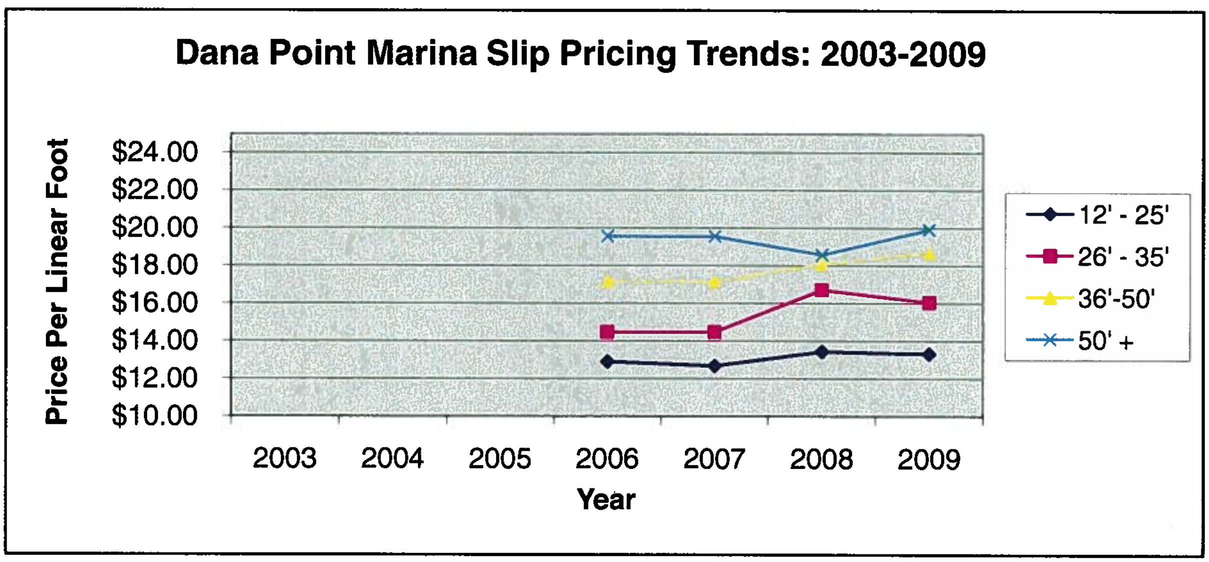
Number of Slips: **1,436**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	752	474	168	42	1,436

	12' - 25'	26' - 35'	36'-50'	50' +
2003				
2004				
2005				
2006	$ 12.92	$ 14.48	$ 17.15	$ 19.57
2007	$ 12.69	$ 14.48	$ 17.15	$ 19.57
2008	$ 13.44	$ 16.72	$ 18.09	$ 18.58
2009	$ 13.32	$ 16.06	$ 18.69	$ 19.92
Period Change				
2006-2008	4.0%	15.5%	5.5%	-5.1%
2006-2009	3.1%	10.9%	9.0%	1.8%
Annual Change				
2006-2008	2.0%	7.7%	2.7%	-2.5%
2006-2009	1.0%	3.6%	3.0%	0.6%

Indexed Rates	12' - 25'	26' - 35'	36'-50'	50' +
2001				
2003	#DIV/0!	1.00	#DIV/0!	#DIV/0!
2004	#DIV/0!	1.00	#DIV/0!	#DIV/0!
2005	#DIV/0!	1.00	#DIV/0!	#DIV/0!
2006	0.89	1.00	1.18	1.35
2007	0.88	1.00	1.18	1.35
2008	0.80	1.00	1.08	1.11
2009	0.83	1.00	1.16	1.24

Note: In most cases, 2003-2008 rents given are the median of MDR pricing survey data for each size category.
Where data was unavailable green highlighted data points were interpolated based on other available data.



SoCal Marina Pricing Data

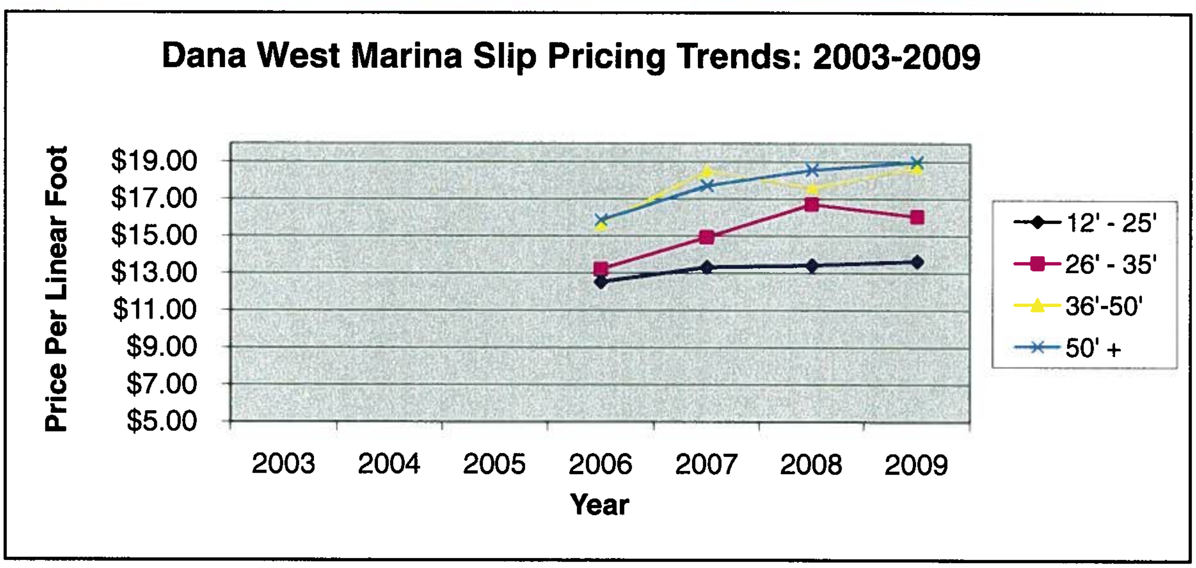
Marina: **Dana West Marina**

Number of Slips: **981**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	288	511	160	22	981
	12' - 25'	26' - 35'	36'-50'	50' +	
2003					
2004					
2005					
2006	$ 12.53	$ 13.22	$ 15.63	$ 15.86	
2007	$ 13.34	$ 14.94	$ 18.52	$ 17.72	
2008	$ 13.44	$ 16.72	$ 17.60	$ 18.58	
2009	$ 13.65	$ 16.05	$ 18.69	$ 18.98	
Period Change					
2006-2008	7.3%	26.5%	12.6%	17.2%	
2006-2009	8.9%	21.4%	19.6%	19.7%	
Annual Change					
2006-2008	3.6%	13.2%	6.3%	8.6%	
2006-2009	3.0%	7.1%	6.5%	6.6%	

Indexed Rates	12' - 25'	26' - 35'	36'-50'	50' +
2001				
2003	#DIV/0!	1.00	#DIV/0!	#DIV/0!
2004	#DIV/0!	1.00	#DIV/0!	#DIV/0!
2005	#DIV/0!	1.00	#DIV/0!	#DIV/0!
2006	0.95	1.00	1.18	1.20
2007	0.89	1.00	1.24	1.19
2008	0.80	1.00	1.05	1.11
2009	0.85	1.00	1.16	1.18

Note: In most cases, 2003-2008 rents given are the median of MDR pricing survey data for each size category.
Where data was unavailable green highlighted data points were interpolated based on other available data.



SoCal Marina Pricing Data

Marina: **Lido Yacht Anchorage (Newport Beach)**

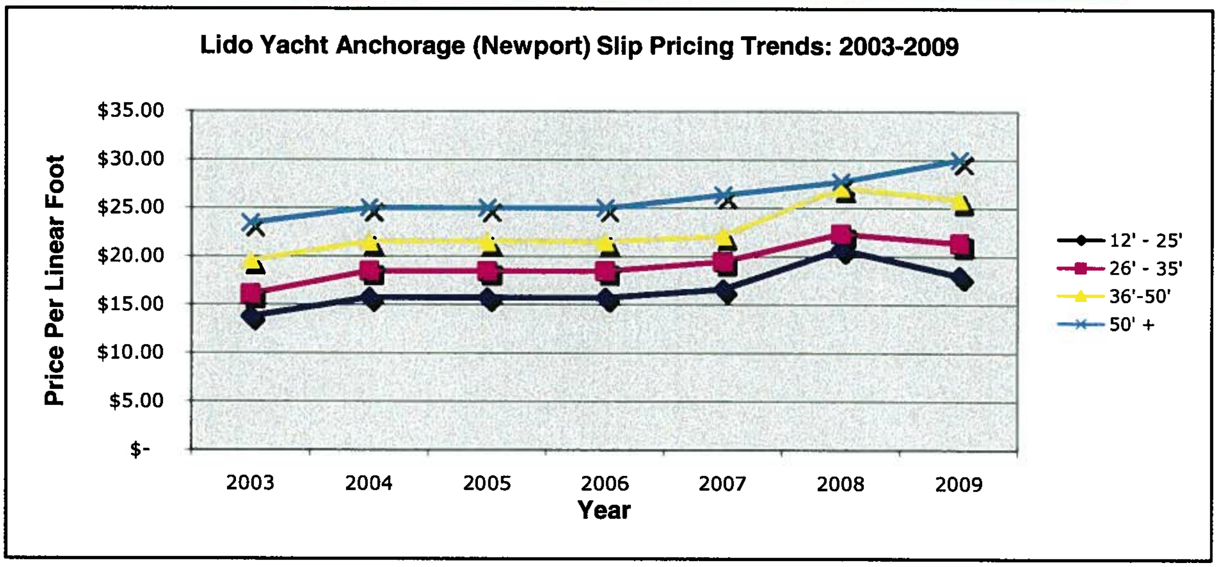
Number of Slips: **251**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	60	116	50	25	251

	12' - 25'	26' - 35'	36'-50'	50' +
2003	$ 13.78	$ 16.10	$ 19.58	$ 23.44
2004	$ 15.75	$ 18.50	$ 21.50	$ 25.00
2005	$ 15.75	$ 18.50	$ 21.50	$ 25.00
2006	$ 15.75	$ 18.50	$ 21.50	$ 25.00
2007	$ 16.63	$ 19.50	$ 22.13	$ 26.38
2008	$ 20.75	$ 22.38	$ 27.13	$ 27.75
2009	$ 18.00	$ 21.38	$ 25.88	$ 30.00
Period Change				
2003-2008	50.6%	39.0%	38.6%	18.4%
2003-2009	30.6%	32.8%	32.2%	28.0%
Annual Change				
2003-2008	10.1%	7.8%	7.7%	3.7%
2003-2009	5.1%	5.5%	5.4%	4.7%

Indexed Rates	12' - 25'	26' - 35'	36'-50'	50' +
2001				
2003	0.86	1.00	1.22	1.46
2004	0.85	1.00	1.16	1.35
2005	0.85	1.00	1.16	1.35
2006	0.85	1.00	1.16	1.35
2007	0.85	1.00	1.13	1.35
2008	0.93	1.00	1.21	1.24
2009	0.84	1.00	1.21	1.40

Note: In most cases, 2003-2008 rents given are the median of MDR pricing survey data for each size category.
Where data was unavailable green highlighted data points were interpolated based on other available data.



SoCal Marina Pricing Data

Marina: **Bayside Marina (Newport Beach)**

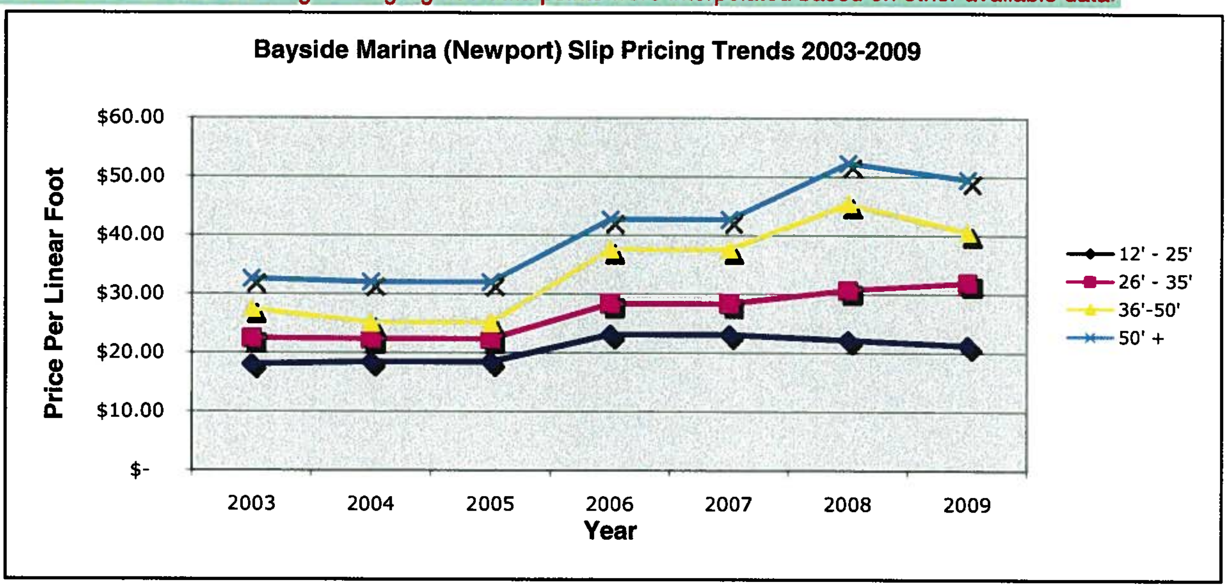
Number of Slips: **101**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	40	28	6	27	101

	12' - 25'	26' - 35'	36'-50'	50' +
2003	$ 18.07	$ 22.47	$ 27.45	$ 32.60
2004	$ 18.43	$ 22.36	$ 25.13	$ 32.00
2005	$ 18.43	$ 22.36	$ 25.13	$ 32.00
2006	$ 23.13	$ 28.38	$ 37.63	$ 42.75
2007	$ 23.13	$ 28.38	$ 37.63	$ 42.75
2008	$ 22.21	$ 30.72	$ 45.44	$ 52.40
2009	$ 21.28	$ 31.95	$ 40.56	$ 49.53
Period Change				
2003-2008	22.9%	36.7%	65.5%	60.7%
2003-2009	17.8%	42.2%	47.8%	51.9%
Annual Change				
2003-2008	4.6%	7.3%	13.1%	12.1%
2003-2009	3.0%	7.0%	8.0%	8.7%

Indexed Rates	12' - 25'	26' - 35'	36'-50'	50' +
2001				
2003	0.80	1.00	1.22	1.45
2004	0.82	1.00	1.12	1.43
2005	0.82	1.00	1.12	1.43
2006	0.82	1.00	1.33	1.51
2007	0.82	1.00	1.33	1.51
2008	0.72	1.00	1.48	1.71
2009	0.67	1.00	1.27	1.55

Note: In most cases, 2003-2008 rents given are the median of MDR pricing survey data for each size category. Where data was unavailable green highlighted data points were interpolated based on other available data.



SoCal Marina Pricing Data

Marina: **Channel Islands Marina (Ventura)**

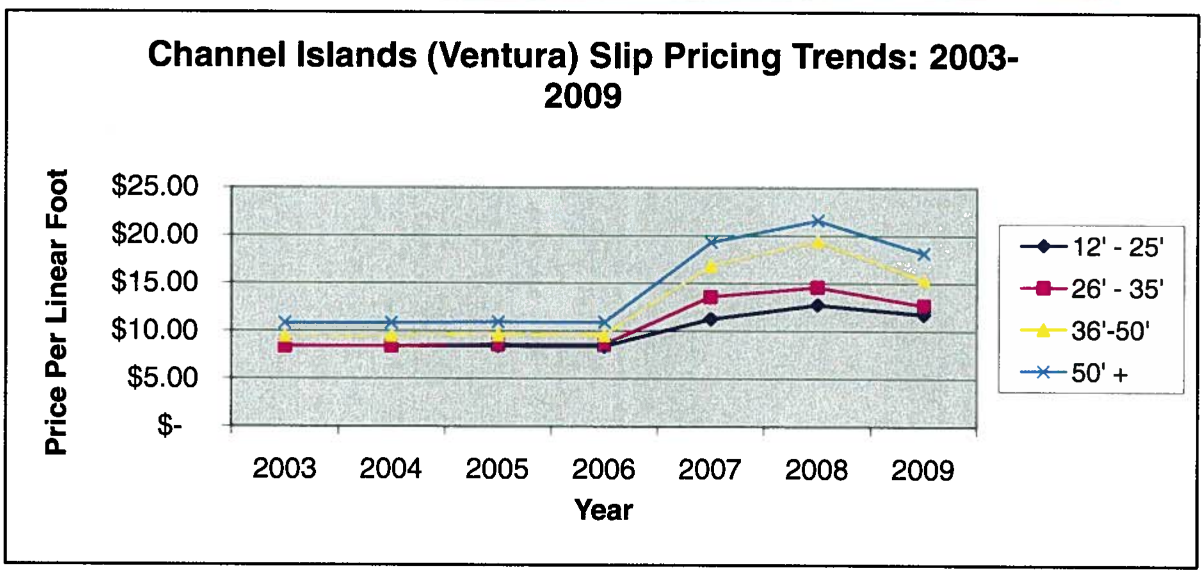
Number of Slips: **403**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	28	105	234	36	403

	12' - 25'	26' - 35'	36'-50'	50' +
2003	$ 8.40	$ 8.40	$ 9.45	$ 10.81
2004	$ 8.40	$ 8.40	$ 9.45	$ 10.81
2005	$ 8.40	$ 8.56	$ 9.55	$ 10.93
2006	$ 8.40	$ 8.56	$ 9.55	$ 10.93
2007	$ 11.28	$ 13.61	$ 16.87	$ 19.30
2008	$ 12.76	$ 14.60	$ 19.43	$ 21.60
2009	$ 11.75	$ 12.68	$ 15.34	$ 18.18
Period Change				
2003-2008	51.9%	73.8%	105.6%	99.8%
2003-2009	39.9%	51.0%	62.3%	68.2%
Annual Change				
2003-2008	10.4%	14.8%	21.1%	20.0%
2003-2009	6.6%	8.5%	10.4%	11.4%

Indexed Rates	12' - 25'	26' - 35'	36'-50'	50' +
2001				
2003	1.00	1.00	1.13	1.29
2004	1.00	1.00	1.13	1.29
2005	0.98	1.00	1.12	1.28
2006	0.98	1.00	1.12	1.28
2007	0.83	1.00	1.24	1.42
2008	0.87	1.00	1.33	1.48
2009	0.93	1.00	1.21	1.43

Note: In most cases, 2003-2008 rents given are the median of MDR pricing survey data for each size category. Where data was unavailable green highlighted data points were interpolated based on other available data.



SoCal Marina Pricing Data

Marina: **Anacapa Isle Marina (Ventura)**

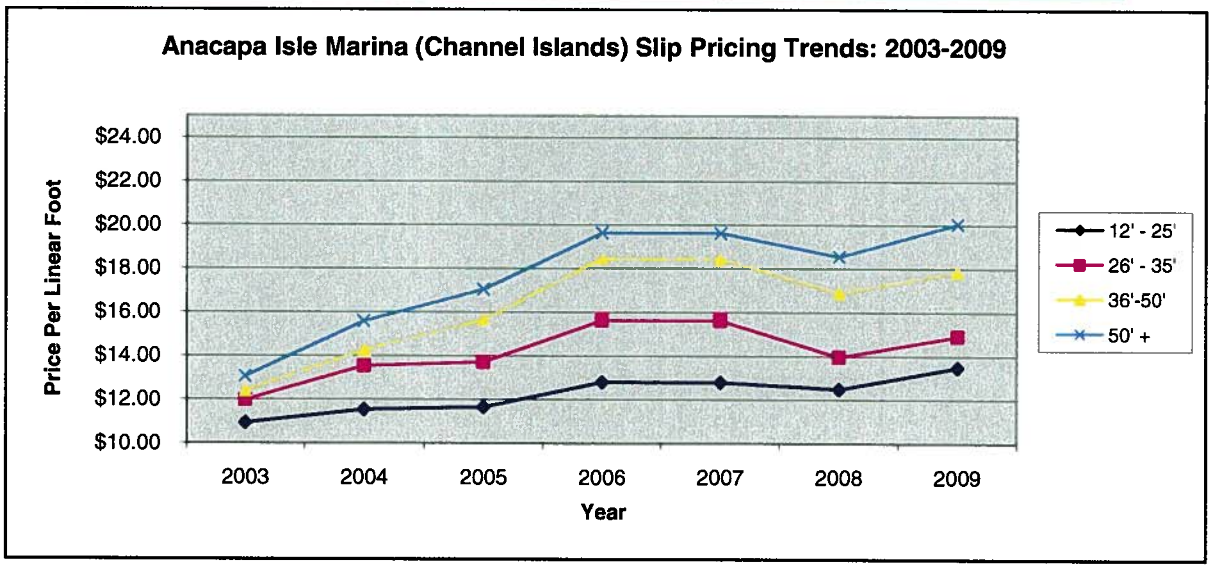
Number of Slips: **438**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	134	158	99	47	438

	12' - 25'	26' - 35'	36'-50'	50' +
2003	$ 10.92	$ 11.97	$ 12.38	$ 13.04
2004	$ 11.52	$ 13.53	$ 14.24	$ 15.56
2005	$ 11.64	$ 13.71	$ 15.64	$ 17.02
2006	$ 12.80	$ 15.63	$ 18.44	$ 19.63
2007	$ 12.80	$ 15.63	$ 18.44	$ 19.63
2008	$ 12.48	$ 13.96	$ 16.89	$ 18.56
2009	$ 13.48	$ 14.90	$ 17.85	$ 20.05
Period Change				
2003-2008	14.3%	16.6%	36.4%	42.3%
2003-2009	23.4%	24.5%	44.2%	53.8%
Annual Change				
2003-2008	2.9%	3.3%	7.3%	8.5%
2003-2009	3.9%	4.1%	7.4%	9.0%

Indexed Rates	12' - 25'	26' - 35'	36'-50'	50' +
2001				
2003	0.91	1.00	1.03	1.09
2004	0.85	1.00	1.05	1.15
2005	0.85	1.00	1.14	1.24
2006	0.82	1.00	1.18	1.26
2007	0.82	1.00	1.18	1.26
2008	0.89	1.00	1.21	1.33
2009	0.90	1.00	1.20	1.35

Note: In most cases, 2003-2008 rents given are the median of MDR pricing survey data for each size category. Where data was unavailable green highlighted data points were interpolated based on other available data.



APPENDIX C: Slip Vacancy & Patterns in Marina Del Rey

Version: MDR - Vacancy Data 2009-3-4

TABLE OF CONTENTS

Note: Independently Priced Slips are those slips that are not associated with yacht clubs, hotels, boat yards and/or boat sales. These include slips belonging to parcels 7,8,10,13,15,18,20,21,28,111/112.
* Due to the fact that the recently completed Parcel 12 has still not achieved stabilized pricing (vacancy is currently over 60%), it is not included as a part of the summary data tables.

MDR Vacancy Data

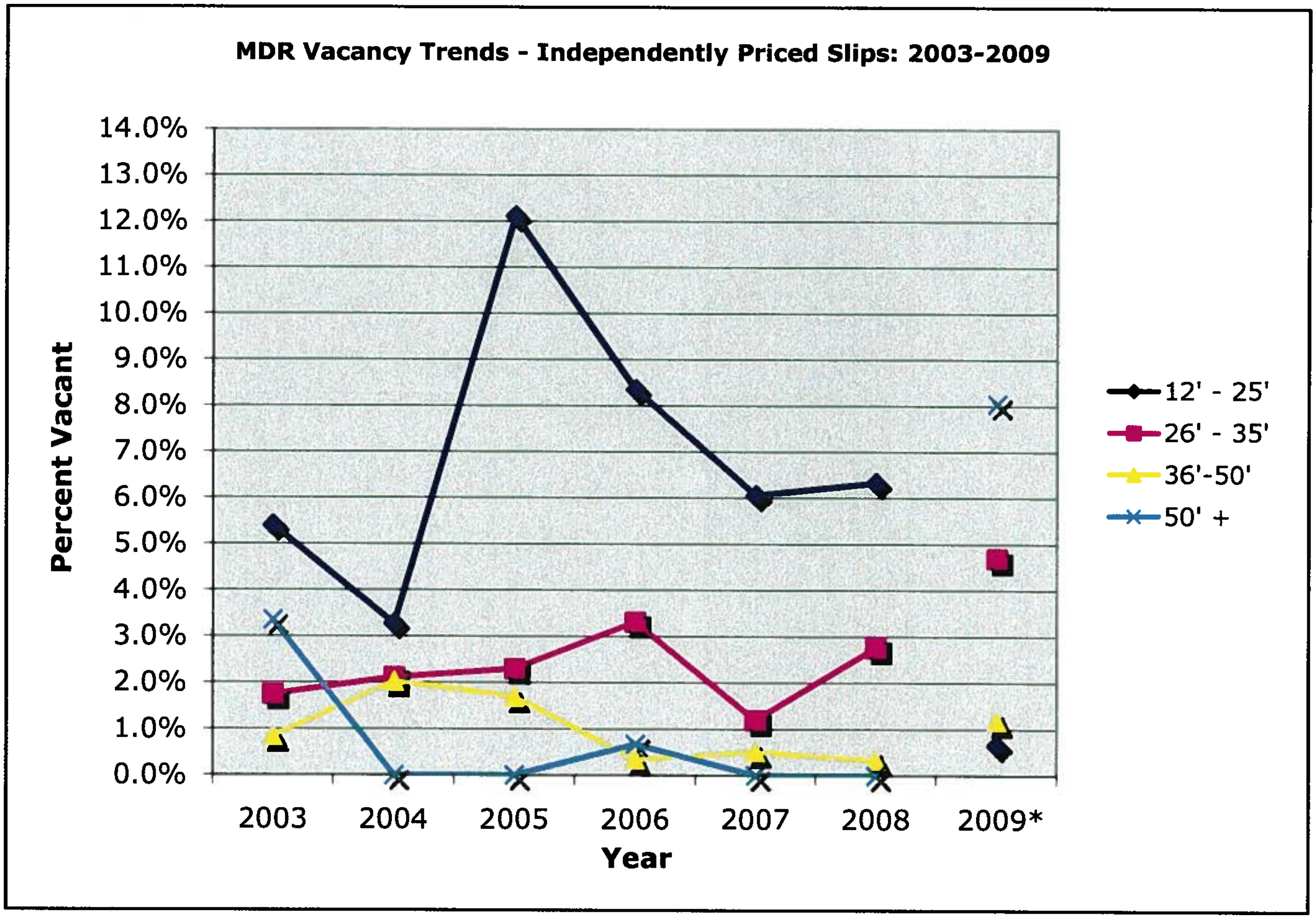
Independently Priced Slips - Vacancy Trends

Number of Slips: **2,438**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	611	1,086	592	149	2,438

	12' - 25'	26' - 35'	36'-50'	50' +	Total
2003	5.4%	1.7%	0.8%	3.4%	2.5%
2004	3.3%	2.1%	2.0%	0.0%	2.3%
2005	12.1%	2.3%	1.7%	0.0%	4.5%
2006	8.3%	3.3%	0.3%	0.7%	3.7%
2007	6.1%	1.2%	0.5%	0.0%	2.2%
2008	6.3%	2.8%	0.3%	0.0%	2.9%
2009*	0.7%	4.7%	1.2%	8.1%	3.0%

Note: In most cases, 2003-2008 rents given are the midpoint of MDR pricing survey data for each size category.
* 2009 data points are from February 2009 while all other data points are from July of the corresponding year. As a result, it is possible that seasonal vacancy changes may skew the trend results.
**** Due to the fact that the recently completed Parcel 12 has still not achieved stabilized pricing (vacancy is currently over 60%), it is not included as a part of the summary data tables.**



MDR Vacancy Data

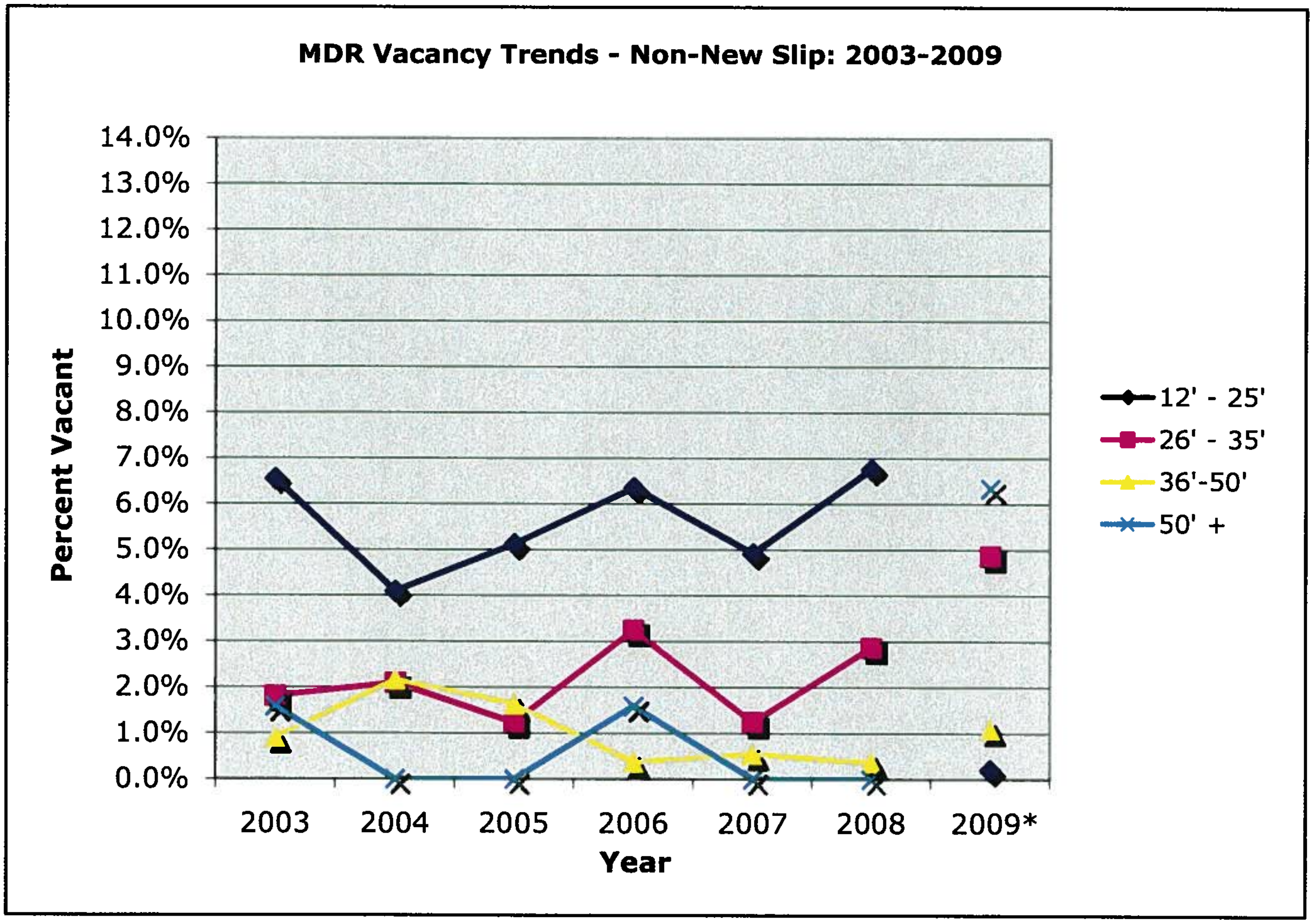
Independently Priced Slips - Non-New Slip Vacancy Trends (Excludes Parcels 111, 112)

Number of Slips: **2,151**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	488	1,047	553	63	2,151

Year	12' - 25'	26' - 35'	36'-50'	50' +	Total
2003	6.6%	1.8%	0.9%	1.6%	2.6%
2004	4.1%	2.1%	2.2%	0.0%	2.5%
2005	5.1%	1.2%	1.6%	0.0%	2.2%
2006	6.4%	3.2%	0.4%	1.6%	3.2%
2007	4.9%	1.2%	0.5%	0.0%	1.9%
2008	6.8%	2.9%	0.4%	0.0%	3.0%
2009*	0.2%	4.9%	1.1%	6.3%	2.9%

Note: In most cases, 2003-2008 rents given are the midpoint of MDR pricing survey data for each size category.
* 2009 data points are from February 2009 while all other data points are from July of the corresponding year. As a result, it is possible that seasonal vacancy changes may skew the trend results.



MDR Vacancy Data

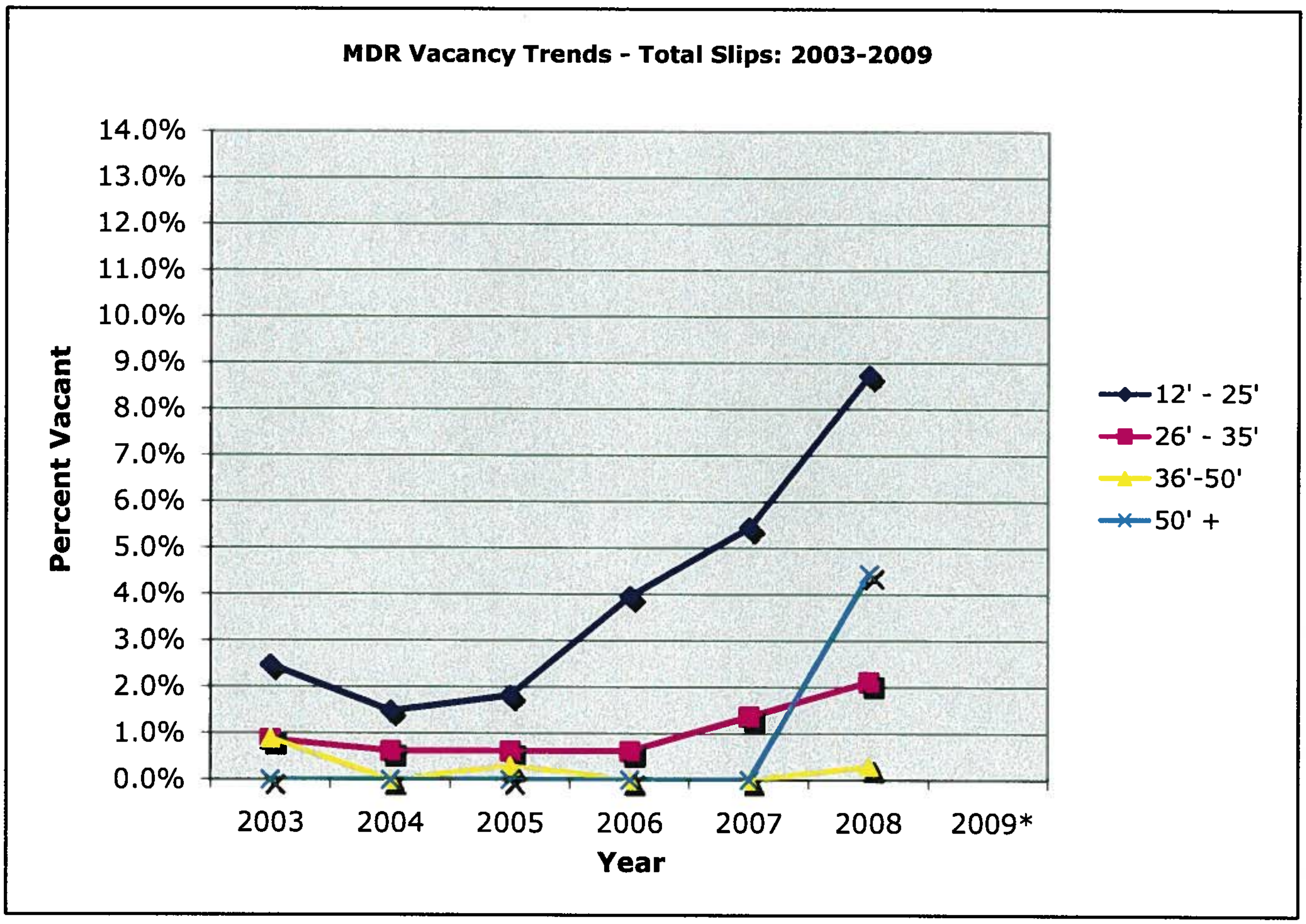
Adjacency Affected Slips - Vacancy Trends

Number of Slips: **1,792**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	607	804	336	45	1,792

	12' - 25'	26' - 35'	36'-50'	50' +	Total
2003	2.5%	0.9%	0.9%	0.0%	1.4%
2004	1.5%	0.6%	0.0%	0.0%	0.8%
2005	1.8%	0.6%	0.3%	0.0%	0.9%
2006	4.0%	0.6%	0.0%	0.0%	1.6%
2007	5.4%	1.4%	0.0%	0.0%	2.5%
2008	8.7%	2.1%	0.3%	4.4%	4.1%
2009*					

Note: In most cases, 2003-2008 rents given are the midpoint of MDR pricing survey data for each size category.
* 2009 data was not collected for adjacency affected marinas because study was focused on independent pricing trends



MDR Vacancy Data

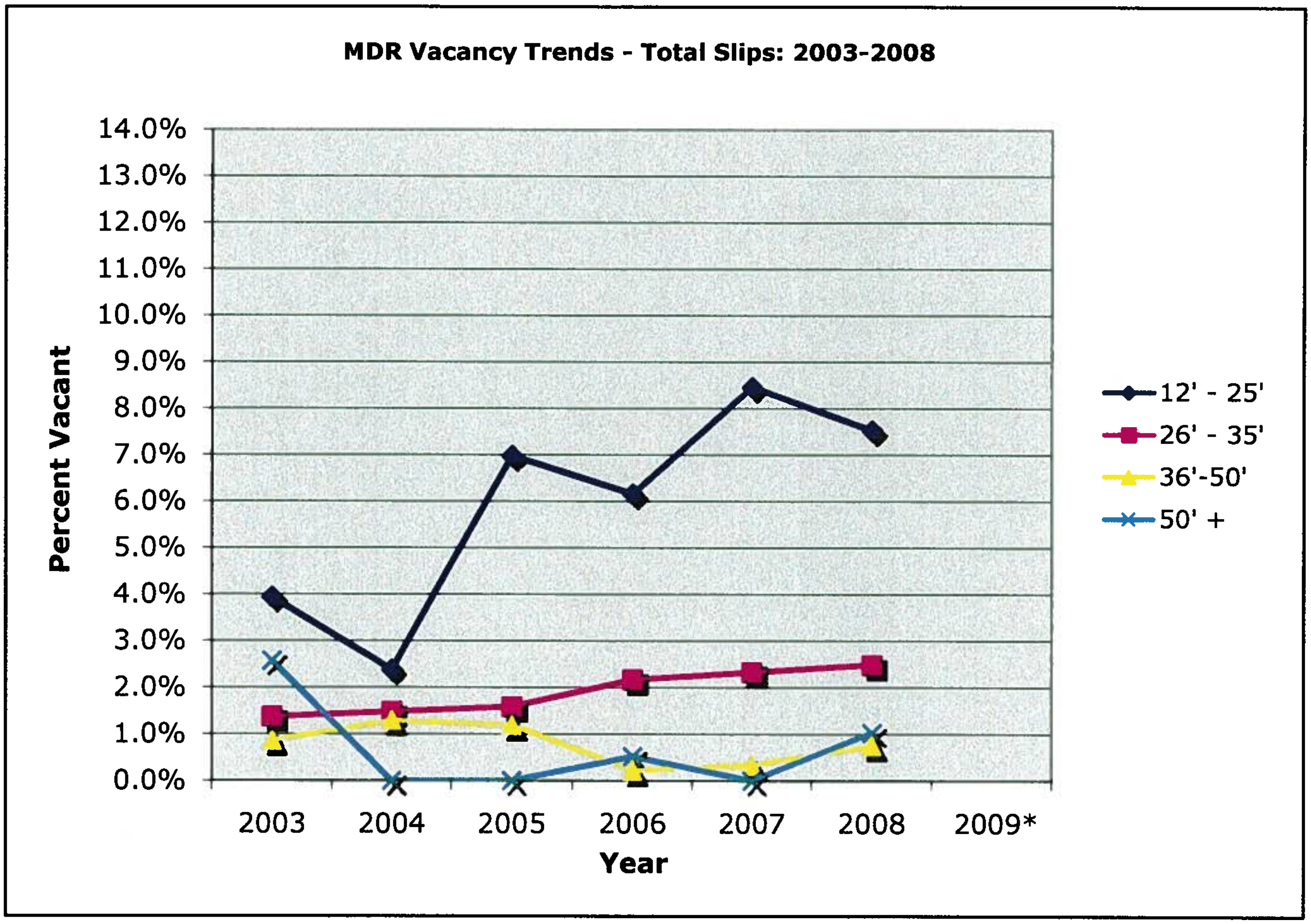
All Slips - Vacancy Trends

Number of Slips: **4,230**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	1,218	1,890	928	194	4,230

	12' - 25'	26' - 35'	36'-50'	50' +	Total
2003	3.9%	1.4%	0.9%	2.6%	2.1%
2004	2.4%	1.5%	1.3%	0.0%	1.6%
2005	7.0%	1.6%	1.2%	0.0%	3.0%
2006	6.2%	2.2%	0.2%	0.5%	2.8%
2007	8.5%	2.3%	0.3%	0.0%	3.5%
2008	7.5%	2.5%	0.8%	1.0%	3.5%
2009*					

Note: In most cases, 2003-2008 rents given are the midpoint of MDR pricing survey data for each size category.
* 2009 data was not collected for all marinas because study was focused on independent pricing trends



Independently Priced Slips

MDR Vacancy Data

Parcel: **7 - Tahiti Marina**

Number of Slips: **214**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	0	132	61	21	214
Year		0.8%	0.0%	0.0%	
2003		0.8%	0.0%	4.8%	
2004		0.0%	0.0%	0.0%	
2005		0.0%	0.0%	0.0%	
2006		0.0%	0.0%	0.0%	
2007		0.0%	0.0%	0.0%	
2008		1.5%	0.0%	0.0%	
2009*		3.0%	0.0%	14.3%	

* 2009 data points are from February 2009 while all other data points are from July of the corresponding year. As a result, it is possible that seasonal vacancy changes may skew the trend results.

MDR Vacancy Data

Parcel: **8 - Bay Club**

Number of Slips: **231**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	0	170	61	0	231
Year		1.8%	0.0%		
2003		0.0%	1.6%		
2004		0.6%	0.0%		
2005		0.0%	0.0%		
2006		0.0%	0.0%		
2007		0.0%	0.0%		
2008		0.0%	0.0%		
2009*		5.9%	1.6%		

* 2009 data points are from February 2009 while all other data points are from July of the corresponding year. As a result, it is possible that seasonal vacancy changes may skew the trend results.

MDR Vacancy Data

Parcel: **10-Neptune**

Number of Slips: **184**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	14	150	20	0	184
Year					
2003	0.0%	0.0%	0.0%		
2004	0.0%	1.3%	0.0%		
2005	0.0%	0.0%	0.0%		
2006	7.1%	4.0%	5.0%		
2007	0.0%	0.7%	0.0%		
2008	0.0%	1.3%	0.0%		
2009*	7.1%	0.7%	20.0%		

* 2009 data points are from February 2009 while all other data points are from July of the corresponding year. As a result, it is possible that seasonal vacancy changes may skew the trend results.

MDR Vacancy Data

Parcel: **13 - Villa del Mar**

Number of Slips: **186**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	0	33	145	8	186
Year					
2003		0.0%	0.0%	0.0%	
2004		6.1%	0.0%	0.0%	
2005		0.0%	0.0%	0.0%	
2006		0.0%	0.0%	0.0%	
2007		0.0%	0.0%	0.0%	
2008		0.0%	0.0%	0.0%	
2009*		3.0%	0.7%	12.5%	

* 2009 data points are from February 2009 while all other data points are from July of the corresponding year. As a result, it is possible that seasonal vacancy changes may skew the trend results.

MDR Vacancy Data

Parcel: **15 - Bar Harbor / Espirit 2**

Number of Slips: **215**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total	
Number of Slips	98	65	52	0	215	
Year						
2003	4.1%	0.0%	0.0%			
2004	0.0%	1.5%	1.9%			
2005	2.0%	0.0%	0.0%			
2006	1.0%	0.0%	0.0%			
2007	33.7%	30.8%	0.0%			*Vacancy increasing as docks to be demolished.
2008	0.0%	0.0%	7.7%			
2009*	N/A	N/A	N/A			*Currently under construction

* 2009 data points are from February 2009 while all other data points are from July of the corresponding year. As a result, it is possible that seasonal vacancy changes may skew the trend results.

MDR Vacancy Data

Parcel: **18 - Dolphin Marina**

Number of Slips: **424**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	200	107	83	34	424
Year					
2003	3.0%	1.9%	4.8%	0.0%	
2004	3.5%	3.7%	9.6%	0.0%	
2005	1.0%	0.9%	0.0%	0.0%	
2006	3.0%	0.9%	0.0%	2.9%	
2007	3.0%	0.9%	0.0%	0.0%	
2008	1.0%	3.7%	0.0%	0.0%	
2009*	0.0%	0.0%	0.0%	0.0%	

* 2009 data points are from February 2009 while all other data points are from July of the corresponding year. As a result, it is possible that seasonal vacancy changes may skew the trend results.

MDR Vacancy Data

Parcel: **20 - Panay Way / Tradewinds Marina**

Number of Slips: **145**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	54	73	18	0	145
Year					
2003	20.4%	9.6%	0.0%		
2004	9.3%	9.6%	11.1%		
2005	20.4%	6.8%	38.9%		
2006	16.7%	31.5%	0.0%		
2007	1.9%	4.1%	0.0%		
2008	0.0%	2.7%	0.0%		
2009*	0.0%	0.0%	0.0%		

*Reconfiguration said to be completed changing total slips from 145 to 149. However, the size of the 4 additional slips is unclear, and thus, are not counted here.

* 2009 data points are from February 2009 while all other data points are from July of the corresponding year. As a result, it is possible that seasonal vacancy changes may skew the trend results.

MDR Vacancy Data

Parcel: **21 - Holiday Harbor**

Number of Slips: **183**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	122	50	11	0	183
Year					
2003	9.0%	0.0%	0.0%		
2004	6.6%	10.0%	0.0%		
2005	8.2%	8.0%	0.0%		
2006	11.5%	2.0%	0.0%		
2007	13.9%	6.0%	0.0%		
2008	25.4%	8.0%	0.0%		
2009*	0.0%	0.0%	0.0%		

* 2009 data points are from February 2009 while all other data points are from July of the corresponding year. As a result, it is possible that seasonal vacancy changes may skew the trend results.

MDR Vacancy Data

Parcel: **28 - Mariner's Bay**

Number of Slips: **369**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	0	267	102	0	369
Year					
2003		3.4%	0.0%		
2004		0.0%	1.0%		
2005		1.1%	2.0%		
2006		1.1%	1.0%		
2007		1.9%	2.9%		
2008		6.0%	2.0%		
2009*		13.1%	0.0%		

* 2009 data points are from February 2009 while all other data points are from July of the corresponding year. As a result, it is possible that seasonal vacancy changes may skew the trend results.

MDR Vacancy Data

Parcel: **111 - Marina Harbor**

Number of Slips: **112**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	21	28	17	46	112
Year					
2003	4.8%	0.0%	0.0%	8.7%	
2004	0.0%	3.6%	0.0%	0.0%	
2005	4.8%	42.9%	5.9%	0.0%	
2006	4.8%	3.6%	0.0%	0.0%	*Reconfiguration completed changing total slips from 248 to 112.
2007	0.0%	0.0%	0.0%	0.0%	
2008	12.7%	0.0%	0.0%	0.0%	
2009*	2.4%	0.0%	2.6%	9.3%	

* 2009 data points are from February 2009 while all other data points are from July of the corresponding year. As a result, it is possible that seasonal vacancy changes may skew the trend results.

MDR Vacancy Data

Parcel: **112 - Marina Harbor**

Number of Slips: **175**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total	
Number of Slips	102	11	22	40	175	
Year						
2003	n/a	n/a	n/a	n/a		*Majority of slips vacated for redevelopment, not included in summary data
2004	0.0%	0.0%	0.0%	0.0%		*Reconfiguration completed changing total slips from 315 to 175.
2005	47.1%	0.0%	0.0%	0.0%		
2006	18.6%	9.1%	0.0%	0.0%		
2007	12.7%	0.0%	0.0%	0.0%		
2008	2.9%	0.0%	0.0%	0.0%		
2009*	2.4%	0.0%	2.6%	9.3%		

* 2009 data points are from February 2009 while all other data points are from July of the corresponding year. As a result, it is possible that seasonal vacancy changes may skew the trend results.

Adjacency Affected Slips

MDR Vacancy Data

Parcel: **41 - Catalina Yacht Anchorage**

Number of Slips: **148**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	101	46	1	0	148
Year					
2003	2.0%	2.2%	0.0%		
2004	2.0%	2.2%	0.0%		
2005	2.0%	6.5%	100.0%		
2006	0.0%	0.0%	0.0%		
2007	0.0%	0.0%	0.0%		
2008	0.0%	0.0%	0.0%		
2009*					

* 2009 data was not collected for adjacency affected marinas because study was focused on independent pricing trends

MDR Vacancy Data

Parcel: **42/43 - MDR Hotel**

Number of Slips: **349**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	107	192	50	0	349
Year					
2003	7.5%	0.5%	0.0%		
2004	1.9%	1.0%	0.0%		
2005	1.9%	0.0%	0.0%		
2006	5.6%	0.0%	0.0%		
2007	0.0%	0.0%	0.0%		
2008	6.5%	1.6%	0.0%		
2009*					

* 2009 data was not collected for adjacency affected marinas because study was focused on independent pricing trends

MDR Vacancy Data

Parcel: **44 - Pier 44**

Number of Slips: **397**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	273	114	10	0	397
Year					
2003	1.8%	0.0%	0.0%		
2004	1.1%	0.0%	0.0%		
2005	2.6%	0.0%	0.0%		
2006	6.6%	0.0%	0.0%		
2007	11.0%	2.6%	0.0%		
2008	15.4%	0.0%	0.0%		
2009*					

* 2009 data was not collected for adjacency affected marinas because study was focused on independent pricing trends

MDR Vacancy Data

Parcel: **47 - SMYC**

Number of Slips: **173**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	56	109	8	0	173
Year					
2003	0.0%	0.0%	0.0%		
2004	1.8%	0.9%	0.0%		
2005	0.0%	1.8%	0.0%		
2006	0.0%	2.8%	0.0%		
2007	0.0%	2.8%	0.0%		
2008	7.1%	2.8%	0.0%		
2009*					

* 2009 data was not collected for adjacency affected marinas because study was focused on independent pricing trends

MDR Vacancy Data

Parcel: 53 - Yamaha

Number of Slips: 103

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	32	62	9	0	103
Year					
2003	0.0%	0.0%	0.0%		
2004	3.1%	1.6%	0.0%		
2005	0.0%	0.0%	0.0%		
2006	0.0%	3.2%	0.0%		
2007	0.0%	0.0%	0.0%		
2008	0.0%	0.0%	0.0%		
2009*					

* 2009 data was not collected for adjacency affected marinas because study was focused on independent pricing trends

MDR Vacancy Data

Parcel: **54 - Windward Yacht Club**

Number of Slips: **53**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	0	4	35	14	53
Year					
2003		0.0%	2.9%	0.0%	
2004		0.0%	0.0%	0.0%	
2005		0.0%	0.0%	0.0%	
2006		0.0%	0.0%	0.0%	
2007		0.0%	0.0%	0.0%	
2008		0.0%	0.0%	7.1%	
2009*					

* 2009 data was not collected for adjacency affected marinas because study was focused on independent pricing trends

MDR Vacancy Data

Parcel: **125 - Marina City**

Number of Slips: **316**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	13	205	80	18	316
Year					
2003	0.0%	1.0%	0.0%	0.0%	
2004	0.0%	0.0%	0.0%	0.0%	
2005	0.0%	0.0%	0.0%	0.0%	
2006	0.0%	0.0%	0.0%	0.0%	
2007	23.1%	2.4%	0.0%	0.0%	
2008	0.0%	5.4%	1.3%	5.6%	
2009*					

* 2009 data was not collected for adjacency affected marinas because study was focused on independent pricing trends

MDR Vacancy Data

Parcel: **132 - California Yacht Club**

Number of Slips: **253**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	25	72	143	13	253
Year					
2003	0.0%	4.2%	1.4%	0.0%	
2004	0.0%	0.0%	0.0%	0.0%	
2005	0.0%	0.0%	0.0%	0.0%	
2006	0.0%	0.0%	0.0%	0.0%	
2007	0.0%	0.0%	0.0%	0.0%	
2008	0.0%	0.0%	0.0%	0.0%	
2009*					

* 2009 data was not collected for adjacency affected marinas because study was focused on independent pricing trends

MDR Vacancy Data

Parcel: **12 - Esprit 1**

**** Due to the fact that the recently completed Parcel 12 has still not achieved stabilized pricing (vacancy is currently over 60%), it is not included as a part of the summary data tables.**

Number of Slips: **216**

Slip Size	12' - 25'	26' - 35'	36'-50'	50' +	Total
Number of Slips	0	30	111	75	216
Year					
2003					
2004					
2005					
2006					
2007					
2008					
2009		60.0%	68.5%	62.7%	

ADK&A

Allan D. Kotin & Associates
Real Estate Consulting for Public Private Joint Ventures
949 S. Hope Street, Suite 200, Los Angeles, CA 90015

310.820.0900
213.623.3841
Fax 213.623.4231

akotin@adkotin.com

APPENDIX D: RESPONSE TO PUBLIC COMMENTS ON MARINA DEL REY SLIP PRICING AND VACANCY STUDY

On March 24, 2009 Los Angeles County Department of Beaches and Harbors ("DBH") released a draft of Allan D. Kotin & Associates ("ADK&A") Draft Marina del Rey Slip Pricing and Vacancy Study ("Study") for public review and comment. DBH received five written comments from various Marina del Rey stakeholders and provided these comments to ADK&A for review. The following outlines specific responses to public comments provided to ADK&A followed by a summary of the limited changes made to the Study. The full text of public comments along with DBH's response to each is also included at the end of Appendix D.

RESPONSE TO COMMENTS

Marina del Rey Lessees Association – The Lessees Association provided three comments to ADK&A's Study:

1. Page 1: Under "key Findings of the Noble Consultants Report," the word "proposed" should precede "dry storage for smaller boats" in the last sentence of the first paragraph.

   Response: ADK&A has corrected the Study to reflect this proposed change.

2. Page 8: Boat yards and other marina operators do not maintain vacancy to accommodate customers or for the purpose of other collateral uses. Other than minimal staging areas for haul out, all slips are rented to slip tenants and/or leased to sub-tenants.

   Response: See combined response below.

3. Page 9: The difference between so called "independently priced marinas" and other marinas seems to be overblown. It is our experience that all marina slips compete with all other marina slips based upon their individual characteristics and amenities and not based upon whether there is a related upland business. This distinction should be further studied for its validity.

   Response: Fully respecting the comments offered, the fact remains that there necessarily must be some differences in priorities between the independently priced marinas operated for no other purpose than to generate revenues from slip occupancy and adjacency affected marinas which are operated as part of business with other activities and profit sources. ADK&A is not comfortable lumping the two groups together because it seems likely that the price setting and occupancy patterns may in some way be affected in by other priorities.

   More importantly, the fact that ADK&A chose to segregate the two groups has no material effect on the results or conclusions drawn from the Study. Appendix A shows that the adjacency affected slip pricing trends are very similar to those observed in independently priced slips and Appendix C shows the similarity of vacancy trends between the two groups.

Mr. Gregory F. Schem – Mr. Schem also provided three comments to ADK&A's Study. Mr. Schem's comments are nearly identical to the Marina del Rey Lessees Association comments above and are addressed by the above responses.

Mr. Andy Bessette – Mr. Bessette provided general comments questioning the independence of the Study.

Response: The issue of ADK&A's independence was discussed at some length in the public meeting.

Mr. Raymond J. Fisher – Mr. Fisher provided general comments concerning the legitimacy of slip pricing increases in Marina del Rey.

Response: See combined response below.

Mrs. Lynda and Mr. Wesley Little – Mr. and Mrs. Little provided general comments concerning the legitimacy of slip pricing increases in Marina del Rey.

Response: Assessing the legitimacy of slip price increases is not the purpose of the ADK&A Study. The purpose of the Study is to report what slip pricing is and how it has changed over time, not whether or not the changes in pricing are justified.

CHANGES TO THE REPORT

As mentioned above, limited changes were made to the Study; those changes are spelled out in detail below. Also attached for your reference is a redline of the revised report, which tracks the changes from the draft report dated 3/16/09 to the revised version dated 5/7/09.

1. The label at the bottom of the cover page, which read " FINAL DRAFT FOR PUBLIC REVIEW – SUBJECT TO CHANGE" has been removed.

2. A footnote was added to page 1, which notes that, "A draft of this report was circulated on March 24, 2009. In response to comments made on the draft, only minor typographical corrections were made in the document. Comments expressing disagreement with judgments in the document or dissatisfaction with related county policies are addressed in the Addendum, Appendix D." *Note also that the vacancy and pricing data in the report has not*

been updated, and the original March release date is unchanged.

3. On page 1, the last sentence of the first paragraph under the heading " Key Findings of the Noble Consultants Report" was changed to include the word "proposed" before "dry storages for smaller boats."

4. The Cabrillo Marina slip distribution in Exhibit 5 on page 9 has been changed to reflect a correction that DBH received from Kevin Ketchum. Mt. Ketchum acknowledged that the initial error may well have been the result of incorrect information provided to the survey by his personnel. This table is derived from Appendix B, which was updated to reflect this change.

5. A footnote was added to page 9 explaining the update of Exhibit 5.

6. On page 20, the last sentence of the report was changed to read, "except for the Dana West Marina which was up 3.3% last fall." In the previous version it read "off" instead of "up." A footnote was also added, which notes that this was, "As of February 2009 when data was collected (not updated)." *Note: this qualification is critical insofar as there has been a general increase in vacancy and some decline in rates since the date of the survey as a consequence of the general downturn in the economy.*

7. Changed the filename to cite the updated version of the file towards the bottom of page 20 for reference.

all the other sites (the exception was Ballona Lagoon, where we recorded one bird, once). Interestingly, Great Blue Herons were almost completely absent from Oxford Basin. We observed that foraging waterbirds tended to congregate around the storm drains and the tide gate, in particular the eastern storm drain along Washington Boulevard, adjacent to the bike path.

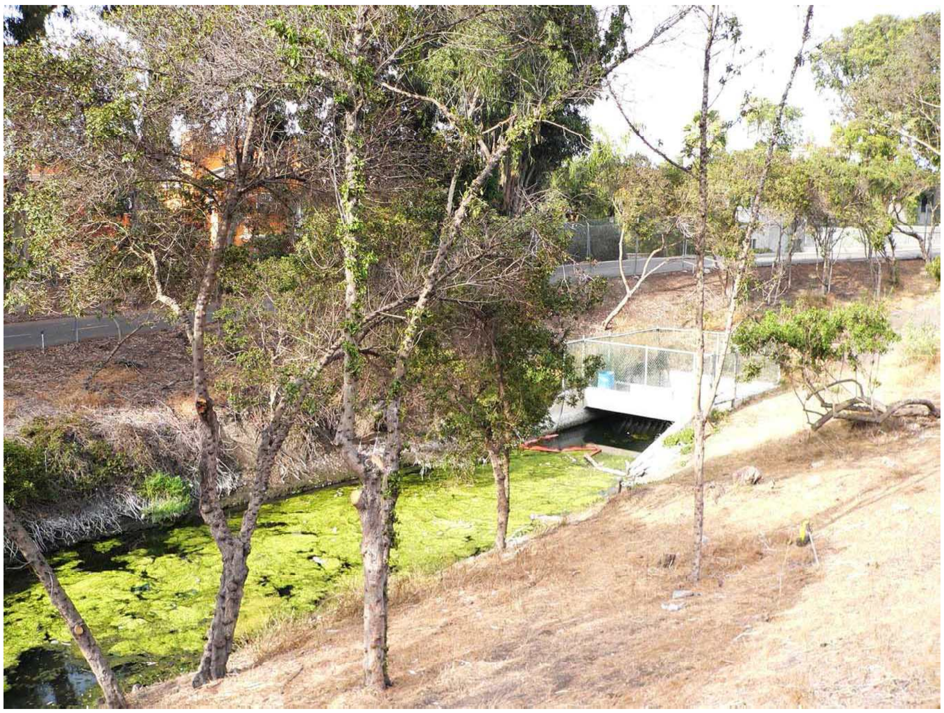


Figure 3–31. This photo, taken on 8 July 2009, shows the typical condition of the southeastern, channelized portion of Oxford Basin. A thick, persistent film of bright green algae indicates eutrophication. The sparse growth of diseased, non-native myoporum above bare ground provides poor quality habitat for native plants and wildlife.

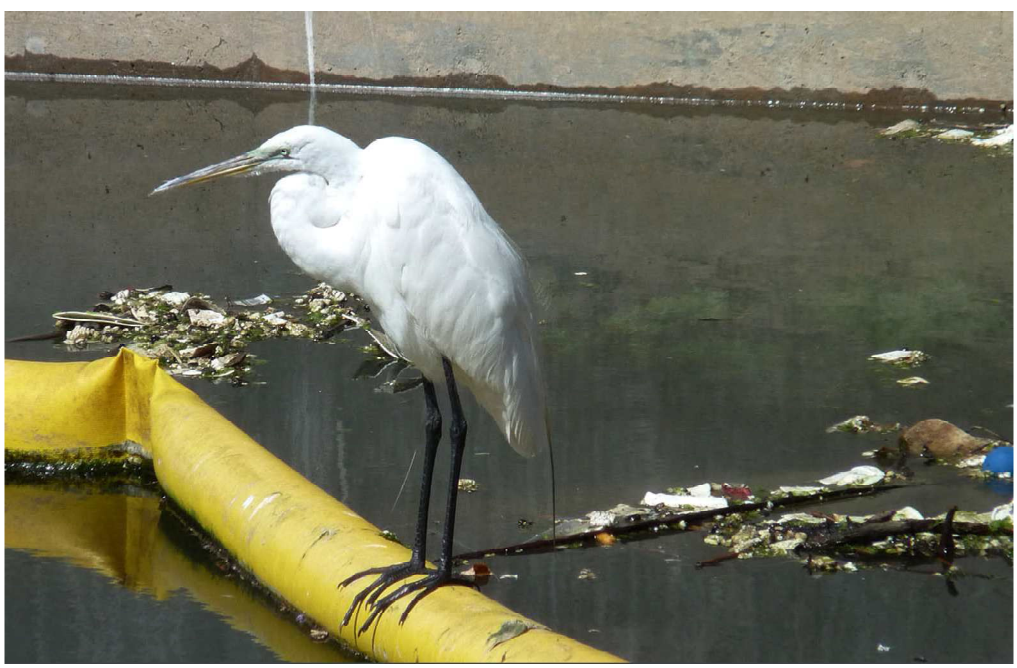


Figure 3–32. This adult Great Egret, photographed on 14 July 2009, was foraging at the western tidal inlet to Oxford Basin. Herons and egrets routinely forage amid the trash that collects along floating debris booms at the lagoon's inlets.

Figure 3–33. These two recently fledged Black-crowned Night-Herons were roosting among grape vines (*Vitis* sp.) at the western end of Oxford Basin on 8 July 2009.

Figure 3–34. This photo, taken on 15 July 2009, shows a Snowy Egret foraging intently at the western inlet to Oxford Basin.

Figure 3–35. This adult Black-crowned Night-Heron, photographed on 14 July 2009, was roosting in myoporum at Oxford Basin.

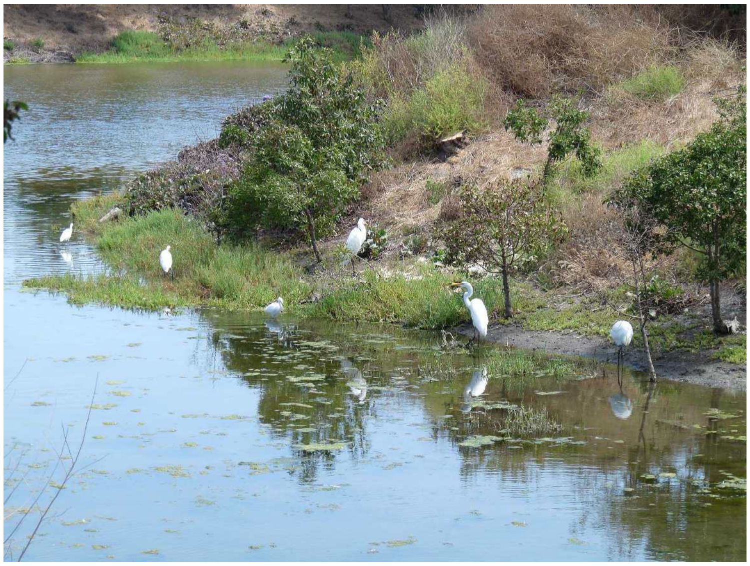
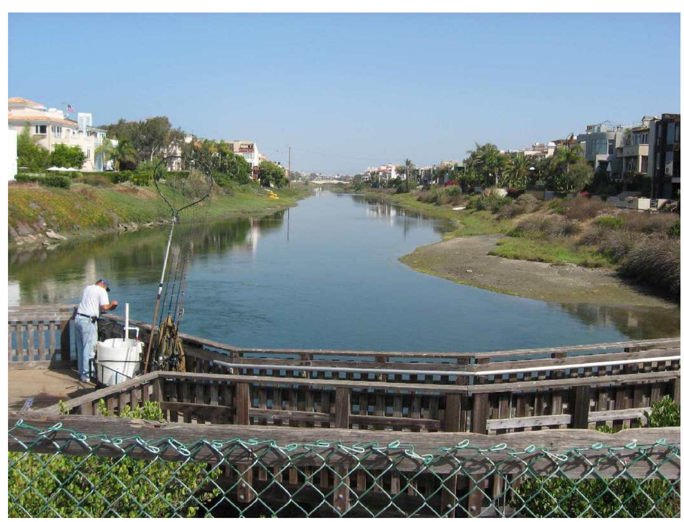


Figure 3–36. Perhaps the most popular foraging area at Oxford Basin is near the eastern storm drain, off Washington Boulevard. This photo, taken on 23 July 2009, shows three Snowy Egrets and an apparent family group of Great Egrets.

3.5.2 BALLONA LAGOON

The northern extent of the former coastal lagoon at the mouth of the Ballona Wetlands, and now the southern extension of the "Grand Canal" in Venice (adjacent to and just west of Marina del Rey) this site has been known as "Ballona Lagoon" since 1996 when extensive habitat restoration was completed in an effort to bring back a native coastal scrub community. The lagoon is tidal, and a band of mudflat is usually exposed around the entire lagoon, but only the upper/northern end drains completely except during the most extreme low tides. Saltmarsh vegetation forms a ring around the upper mudflat, below the coastal scrub. We encountered only Snowy Egrets here in numbers (mainly in the morning, during low tide), but even this species was not especially common at this location (12 birds recorded on 27 July was an exceptional count). This area may be more heavily used in the non-breeding season, especially during fall migration, when dozens of egrets (both Snowy and Great) have been observed fishing in the shallow water of the mudflats (C. Almdale, unpubl. data).

Figure 3–37. This photo, taken by DSC on 10 July 2009, shows Ballona Lagoon at mid-tide. The view is to the northwest, from Via Marina. Herons and egrets forage here most frequently at low tide, when water levels are lower than shown here. A small area of restored coastal scrub is visible at right; slopes along the western side of the lagoon, at left, are dominated by highway iceplant and other non-natives.



3.5.3 DEL REY LAGOON

This wetland area provides resources for the herons and egrets that nest to the north in Marina del Rey; however, some ficus trees (*Ficus* sp.) on the lagoon's west side held a few nests that may have been used by Black-crowned Night-Herons and/or Snowy Egrets in 2009. In late summer 2009, small numbers of these birds roosted in these and several small acacia trees (*Acacia* sp.) along the western shore, mainly during the late afternoon and evening. Del Rey Lagoon had the second-highest usage by Snowy Egret of any site (after Oxford Basin), with birds recorded roughly twice as often during the morning as in the afternoon (4.3/visit vs. 2.2/visit), presumably due to lower tides in the morning. Unlike Oxford Basin, young egrets were infrequently noted here (maximum count of two per visit); this site, and the nearby lower Ballona Creek channel, were used primarily by adult birds.

Figure 3–38. Photo taken on 2 September 2009 showing the southwestern part of Del Rey Lagoon. The ficus trees on the right side of the photo support small numbers of roosting Black-crowned Night-Herons and Snowy Egrets. A few recently used nests observed in these trees during 2009 may have belonged to one or both of these species.

Figure 3–39. Photo taken on 23 July 2009 showing Snowy Egrets roosting in non-native acacia at Del Rey Lagoon.

3.5.4 BALLONA WETLANDS (AREA B)

This, the main tidal marsh area remaining at Ballona, is located between the Ballona Creek channel and Culver Boulevard. It features extensive pickleweed (*Salicornia* spp.) marsh habitat, muddy tidal channels, and a large saltpan that is irregularly moistened by rain, dense fog, and high tides. We found that, during the 2009 breeding season, herons and egrets made use of both the marsh and the tidal channels, but were most often found along tidal channels at the western edge of the saltpan; the rest of the saltmarsh, and all of the saltpan habitat, including that south of Culver Boulevard, was not used by herons or egrets during our observation period, nor were the drier areas of the Ballona Wetlands east along Culver Boulevard toward Lincoln Boulevard.

The Ballona Wetlands (Area B) was by far the most important site for roosting and foraging Great Blue Herons, with up to 22 birds seen per visit, and was the only site where counts of juvenile Great Blue Herons exceeded one bird per visit. Interestingly, counts of adults were higher during the afternoon, at high tide, than during the morning (4.8/visit vs. 3.2/visit) while the opposite usage pattern held true for young birds (0.8/visit vs. 3.6/visit).

Figure 3–40. This photo, taken on 23 July 2009, shows a typical collection of Great Blue Herons (presumably from Marina del Rey colonies) standing out in the pickleweed marsh in the Ballona Wetlands (Area B). Such groups often include smaller numbers of egrets, and birds are frequently seen foraging along the channels themselves. The view is to the southwest from the Ballona Creek channel dike, with Culver Boulevard in the background.

3.5.5 BALLONA FRESHWATER MARSH

This marsh, constructed in 2003 at the corner of Lincoln and Jefferson Boulevards, just south of Marina del Rey, supports modest numbers of foraging and roosting herons and egrets that presumably nest at Marina del Rey. Several freshwater marsh-obligate species, including the Least Bittern (*Ixobrychus exilis*), a California Species of Special Concern, have colonized this area as large expanses of tules, cattails, and other marsh vegetation have rapidly become established. During spring/summer 2009, we typically encountered no more than five herons or egrets at this location, almost always at the west end. In many cases, most of these waders were roosting in the dense stands of tules (*Scirpus* sp.) rather than foraging, presumably because of the dearth of shallow water or open shoreline habitat.

Figure 3–41. Photo taken on 23 July 2009 showing two Great Blue Herons and a Great Egret roosting in tules at the west end of Ballona Freshwater Marsh.

Figure 3–42. This adult Great Blue Heron was foraging at the west end of the Ballona Freshwater Marsh on 15 July 2009.

3.5.6 Centinela Confluence

This refers to the tidally-influenced confluence of Ballona Creek at the Centinela Channel, just south of the 90 Freeway bridge (see Figure 3–43, below). A patch of tall, lush grasses serves as a consistent roosting and foraging location for Great Blue Herons and both species of egrets, including young birds presumably from nests at Marina del Rey (see Figure 3–44 on the following page). These birds were frequently noted flying in from the northwest, and at least Great Blue Herons occurred in slightly larger numbers during afternoon visits (high tide) than morning (3.2/visit vs. 2.4/visit). The area is also used regularly by numbers of roosting (and occasionally foraging) Brown Pelicans, gulls, terns, and shorebirds.

Figure 3–43. Aerial photo showing the Centinela Confluence in detail. Great Blue Herons and the two egret species frequently roost in the area labeled "Grassy Roost," outlined in red. Many other bird species roost and forage elsewhere in the channel areas shown, mainly during middle and low tides when mudflats become exposed.

Figure 3–44. In this photo, taken on 14 July 2009, several Great Blue Herons and a Snowy Egret roost and forage in the tall grasses at the Centinela Confluence.

Figure 3–45. This photo, taken on 15 July 2009, shows a few dozen adult Caspian Terns (*Sterna caspia*) roosting along the concrete bank at the Centinela confluence together with some gulls, Mallards (*Anas platyrhynchos*), and a Brown Pelican.

3.6 Summary & Analysis of Waterbird Observations at Foraging & Roosting Locations

We found usage of the greater Marina del Rey/Ballona area by foraging and day-roosting herons and egrets to be highly variable across sites, depending on species (Table 3–3). As a general statement, Oxford Basin appears to be most important foraging habitat for egrets and night-herons in the study area, Ballona Wetlands (Areas A and B) are particularly valuable for Great Blue Herons, and Del Rey Lagoon is moderately important, especially for Snowy Egrets.

TABLE 3–3: SUMMARY OF MAXIMUM COUNTS OF COLONIAL WATERBIRDS AT FORAGING & DAY-ROOSTING SITES IN LATE JUNE/JULY 2009

Numbers represent the highest counts of each species made on a single visit at each site.

Species	Oxford Basin	Ballona Lagoon	Del Rey Lagoon	Ballona Wetlands Area A	Ballona Wetlands Area B	Ballona Freshwater Marsh	Centinela Confluence	Lower Ballona Creek
Great Blue Heron	1	2	1	12	22	5		0
Great Egret	6		3		1	3		1
Snowy Egret	19	12	15		8	5	8	4
Black-crowned Night-Heron	14	1	0	1		3	0	1
Double-crested Cormorant	1	0	2	0	1	3	0	3

For Great Blue Herons, the most important sites were the Ballona Wetlands (Area A and Area B), and to a lesser extent, the Centinela Confluence. Great Egrets, scarce everywhere, favored Oxford Basin, the only place we saw apparent family groups of this species. Snowy Egrets were most common at Oxford Basin, also the primary foraging area for young of this species; Del Rey Lagoon was also regularly used by foraging and roosting Snowy Egrets. Black-crowned Night-Herons, especially young birds, were seen much more commonly at Oxford Basin than at any other site. Double-crested Cormorants were scarce everywhere, and we expect that most of these birds forage in marine environments offshore.

Table 3–4, on the next page, shows usage broken down by time of day/tide and age. Additional surveys at times of the year when these birds are more abundant would help clarify trends, but three areas appear to be important afternoon foraging/roosting areas for locally-nesting waders: the Centinela Co

TABLE 3–4: COUNTS OF COLONIAL WATERBIRDS IN LATE JUNE/JULY 2009 BY AGE CLASS & TIDE

This table shows the average count per visit at selected sites followed by the maximum count in parenthesis. Mornings (AM; n=10) often had low tides; afternoons (PM; n=6) always had high tides.

Species	Oxford Basin		Ballona Lagoon		Del Rey Lagoon		Ballona Wetlands Area B		Ballona Freshwater Marsh		Centinela Confluence	
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
Great Blue Heron												
adult	0.1 (1)	0.0 (0)	0.2 (1)	0.0 (0)	0.0 (0)	0.0 (0)	3.2 (8)	4.8 (12)	0.7 (3)	0.2 (1)	2.4 (6)	3.2 (6)
juvenile	0.2 (1)	0.3 (1)	0.1 (1)	0.0 (0)	0.1 (1)	0.0 (0)	3.6 (7)	0.8 (5)	0.7 (2)	0.8 (2)	0.2 (1)	0.5 (3)
unknown	0.0 (0)	0 (0)	0 (0)	0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.8 (1)	0.0 (0)	0.2 (1)	0.2 (1)	0.0 (0)
Great Egret												
adult	1.4 (4)	1.3 (3)	0.6 (3)	0.2 (1)	0.5 (3)	0.7 (2)	0.6 (1)	0.3 (1)	0.9 (2)	0.2 (1)	0.1 (1)	0.2 (1)
juvenile	0.8 (2)	0.2 (1)	0.1 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
unknown	0.3 (3)	0.0 (0)	0.2 (2)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.5 (2)	0.1 (1)	0.0 (0)	0.0 (0)	0.0 (0)
Snowy Egret												
adult	4.2 (7)	4.2 (7)	2.4 (12)	1.0 (3)	4.3 (13)	2.2 (7)	0.2 (2)	2.7 (8)	1.1 (3)	1.3 (5)	1.7 (4)	1.8 (5)
juvenile	6.9 (16)	4.5 (7)	0.1 (1)	0.0 (0)	0.9 (2)	0.0 (0)	0.4 (3)	0.0 (0)	0.3 (3)	0.0 (0)	0.3 (2)	0.2 (1)
unknown	0.1 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.4 (3)	0.0 (0)	0.0 (0)	0.0 (0)	0.1 (1)	0.0 (0)	0.5 (3)	0.0 (0)
Black-cr. Night-Heron												
3rd year +	0.1 (1)	0.2 (1)	0.1 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.2 (1)	0.2 (1)	0.1 (1)	0.0 (0)
2nd year	0.0 (0)	0.5 (2)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.2 (1)	0.3 (1)	0.0 (0)	0.1 (1)	0.0 (0)
juvenile	3.2 (8)	5.8 (12)	0.1 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.1 (1)	0.5 (3)	0.4 (2)	0.0 (0)	0.1 (1)	0.0 (0)
Double-cr. Cormorant												
adult	0.0 (0)	0.2 (1)	0.0 (0)	0.0 (0)	0.1 (1)	0.0 (0)	0.0 (0)	0.2 (1)	0.4 (2)	0.8 (2)	0.0 (0)	0.0 (0)

Species	Oxford Basin		Ballona Lagoon		Del Rey Lagoon		Ballona Wetlands Area B		Ballona Freshwater Marsh		Centinela Confluence	
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
juvenile	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.2 (1)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)

3.7 Bird Species of Conservation Concern in Marina del Rey

Building on the research of Cooper (2006), we developed a catalog of bird species that have been recorded in Marina del Rey and elsewhere in the lower Ballona Valley (Appendix D). We then identified 24 regularly-occurring species that have "special status," such as state or federal listing or recognition as California Species of Special Concern, plus another 17 species that we regard as being of local concern (see the following Table 3–5).

As discussed in the table, not all of the special-status species are known to currently occur in the local area, and others do not occur locally in the roles in which they are considered protected. For example, the Yellow Warbler (*Dendroica petechia*) is a common migrant in the Ballona Valley in spring and fall but does not breed locally and did not breed historically; since only breeding individuals are considered Species of Special Concern, it would require a different management approach than a species known to have bred historically. Of the species that occur in the local area regularly, only a few use any contemporary habitats within Marina del Rey proper on a regular basis, such as at Oxford Basin, the northern edge of "Area A," and the harbor itself; far more use the nearby Ballona Wetlands and Ballona Creek.

We have excluded some special-status species that occur as rare or uncommon migrants or winter visitors in the local area (e.g., Olive-sided Flycatcher *Contopus cooperi*, and Southwestern Willow Flycatcher *Empidonax traillii extimus*) if no evidence suggests that the species ever did, or realistically could, breed, regularly overwinter, or regularly oversummer at Marina del Rey.

The Ferruginous Hawk *Buteo regalis* is now considered a California WatchList species (formerly a California Species of Special Concern, but was since dropped from this list due to population stability or population increase). Cooper (2006) found few historical records, but individuals have occurred in the Ballona area in some recent winters. However, it is unlikely that the Ballona Wetlands, restored or not, will ever support more than one wintering Ferruginous Hawk on a regular basis due to the area's small size, and its occurrence at Marina del Rey is unlikely, so it is not regarded as a species of conservation concern in this document.

The Large-billed Savannah Sparrow (*Passerculus sandwichensis rostratus*) was formerly a locally-common winter visitor to the Ballona area but is now essentially a vagrant in Los Angeles County (e.g., Cooper 2006). Its future occurrence in the Ballona area is possible, but not likely, and probably would not be in response to local habitat change. Therefore, it is not regarded as a species of conservation concern here.

We note that the several non-avian special-status species are known from areas surrounding Marina del Rey, at least historically (CDFG, Natural Diversity Data Base 2009a). These include the following:

- Southern California Saltmarsh Shrew (*Sorex ornatus salicornicus*). California Species of Special Concern.
- Pacific Pocketmouse (*Perognathus longimembris pacificus*). Federally listed as endangered; California Species of Special Concern.
- South Coast Marsh Vole (*Microtus californicus stephensi*). California Species of Special Concern.
- Pacific Pond Turtle (*Actinemys marmorata*). California Species of Special Concern.
- Silvery Legless Lizard (*Anniella pulchra pulchra*). California Species of Special Concern.
- Coast Horned Lizard (*Phrynosoma blainvillii*). California Species of Special Concern.

The pocketmouse is considered extirpated from Los Angeles County, and the turtle is localized and now occurs only in foothill drainages. While recent (post-1980) records of a *Sorex* shrew and a *Microtus* vole exist from the nearby Ballona Wetlands, they would not be expected to occur in the small, degraded remnant habitats at Marina del Rey (i.e., at Oxford Basin or the Wetland Park). The legless lizard and possibly the horned lizard occur at the nearby El Segundo Dunes, and at least the legless lizard is known to persist at the Ballona Wetlands/Westchester Bluffs (DSC pers. obs.). However, as is the case with the other animals listed above, they almost certainly would not be found in the small, disturbed habitats at Marina del Rey. Nesting colonial waterbirds would not likely use any of these scarce, cryptic species as important food sources, especially given the "easy prey" of abundant pocket-gophers and rats in the area, but nestlings of protected birds like the California Least Tern which nests on nearby Venice Beach, and, if it resumes nesting in the future, the Western Snowy Plover, would be vulnerable to avian predators, including tree-nesting herons and, especially, the American Crow (*Corvus brachyrhynchos*).

Our highest level of concern is for special-status bird species that a) are not urban-adapted (i.e., that require undeveloped, natural habitat), b) have been extirpated from the Ballona area, and c) could occur again at Marina del Rey in the future if key areas of remaining open space are restored to resemble the area's historical habitats. We conclude that four species best meet these criteria: White-faced Ibis, Long-billed Curlew, California Least Tern, and Clark's Marsh Wren (see Table 3–5 for scientific names). Efforts to promote habitat for these species should be given highest conservation priority and not subjugated to measures geared toward increasing populations of human-tolerant species, including colonial waterbirds or other urban-adapted animals thriving in the local area under existing management practices.

An additional 17 species identified as "local interest species" in Table 3–5 consist of birds that do not have any special status, as they are still widely distributed elsewhere in Los Angeles County and the wider region, but are known to have been extirpated or greatly reduced in number in the Ballona/West Los Angeles area. Such birds may also be regarded as target species for conservation action, although their local recovery would not have the same importance for regional conservation efforts that recovery of the special-status species would have. Among these 17 species, we conclude that the following nine have the highest chance of benefiting from habitat restoration at Marina del Rey: Northern Shoveler, Northern Pintail, Cinnamon Teal, Redhead, Ruddy Duck, Sora, American Coot (breeding population only; common in winter), Black-necked Stilt, American Avocet, and American Goldfinch. In addition, Tree Swallows would likely benefit from provision of nest boxes. After being extirpated as a breeder from much of southern California, the regional population has expanded markedly in the past 20 years, largely due to provision of numerous nest boxes in many areas. Although Tree Swallows were not recorded nesting historically at or near Ballona (Cooper 2006), the species has been nesting in boxes there since 2004 (Cooper 2008).

TABLE 3–5. BIRD SPECIES OF CONSERVATION CONCERN IN MARINA DEL REY & SURROUNDINGS

The following abbreviations are used in Table 3–5:

- CSC: California Species of Special Concern
- FP: California Fully-protected
- MdR: Marina del Rey
- WL: California WatchList (formerly CSC, but since dropped from this list due to population stability/increase).
- LACBSSC: Los Angeles County Bird Species of Special Concern (see *Western Tanager* Vol. 75, No. 3, Jan./Feb. 2009)

References to a "Wetland Park" in Table 3–5 pertain to a plan by the County to restore wetland habitats on a 1.46-acre portion of Parcel 9, at the corner of Via Marina and Tahiti Way; please refer to the map and detailed discussion of this area in Section 6.1.2 of this plan.

Special-Status Species	Protection Status	Recent Occurrence at MdR	Restoration Potential at MdR	Notes
Brant *Branta bernicla*	CSC	Rare transient to open saltwater (<5 records each year).	Low; requires extensive, shallow beds of eelgrass.	–
Least Bittern *Ixobrychus exilis*	CSC	No records.	Low; may occur with introduction of freshwater reedbeds (cattails *Typha* spp., bulrush *Scirpus* spp.)	–
Light-footed Clapper Rail *Rallus longirostris levipes*	Endangered (CA/Fed)	No records.	Low, but possible (with re-introduction?) at Oxford Basin if restored with saltmarsh vegetation.	–
California Brown Pelican *Pelecanus occidentalis californicus*	Endangered (CA) Delisted (Fed)	Common year-round resident, especially summer and fall; roosts on docks, forages for fish in open saltwater.	N/A - already common, and likely to remain so.	–

Special-Status Species	Protection Status	Recent Occurrence at MdR	Restoration Potential	Notes
Double-crested Cormorant *Phalacrocorax auritus*	WL	Has nested in rookery at Villa Venetia/Coast Guard station since 2007; common breeding and non-breeding visitor throughout MdR, roosting on docks and in trees near rookery.	N/A - nests in snags of dead and dying trees.	Confined while nesting to a small number of trees in poor health due to guanotrophy; death of trees would not be due to human actions.
Osprey *Pandion haliaetus*	WL	Uncommon year-round visitor, generally single birds remaining for up to several months. No nesting records, and only considered sensitive when nesting.	High; this species is highly-adaptable to urban/built environments, and appears to be increasing as a breeder statewide where appropriate habitat exists (e.g., unused cranes and structures over water).	–
White-faced Ibis *Plegadis chihi*	WL	No records, but still occurs in migration in Ballona-area wetlands.	Moderate; could occur at Oxford Basin/Wetland Park in migration/winter (Aug. - May) with establishment of shallow-water wetlands, though generally uncommon in region.	–
Virginia Rail *Rallus limicola*	LACBSSC	No records, but occurs year-round at Ballona Freshwater Marsh and recently (2009) bred at Playa Vista (Cooper unpubl. data).	Moderate; could occur at Oxford Basin/Wetland Park in migration/winter (Aug. - May) with establishment of shallow-water wetlands.	–
Cooper's Hawk *Accipiter cooperii*	WL	Probably an uncommon year-round visitor, but few records in MdR proper. May initiate nesting in any mature tree, particularly tall conifers and eucalyptus.	N/A - increasing in area.	Removal of large trees should be accompanied by a raptor nesting survey.

Special-Status Species	Protection Status	Recent Occurrence at MdR	Restoration Potential	Notes
Northern Harrier *Circus cyaneus*	CSC	No records from MdR proper, but occurs regularly at Area A of Ballona Wetlands adjacent to MdR (mainly fall/winter).	Removal of trees in and around Area A (Ballona Wetlands) would improve foraging habitat for this species; Oxford Basin/Wetland Park probably too small to support this species, even in migration.	–
White-tailed Kite *Elanus leucurus*	FP	No records from MdR proper, but forages regularly at Area A of Ballona Wetlands adjacent to MdR, mainly late summer through early winter. Single pairs nested near Ballona in 2002 and 2010.	Removal of trees in and around Area A (Ballona Wetlands) would improve foraging habitat for this species; retention of the largest trees could support at least irregular nesting in the future. Oxford Basin/Wetland Park probably too small to support this species, even in migration.	–
Merlin *Falco columbarius*	WL	No records from MdR proper, but occurs regularly in Ballona Valley and urban Los Angeles Basin (winter).	N/A - this species is a recent colonizer to the Ballona area, and is thriving.	–
Peregrine Falcon *Falco peregrinus anatum*	Endangered (CA); FP	1-2 winter at MdR and forage widely; also occurs as uncommon transient nearly year-round. Often perches on high-rises in MdR.	Restoration of Oxford Basin/Wetland Park would increase foraging opportunities locally.	This species is (now) urban-adapted in Los Angeles area, particularly near high-rise buildings.
Western Snowy Plover *Charadrius alexandrinus nivosus*	Endangered (Fed); CSC	No records, but occurs on sandy beaches in area, and (rarely) at saltpan of Ballona Wetlands (Area B).	Low; prefers sandy beach and alkali flat habitat; Marina Beach probably too small, isolated to support this species.	–
Long-billed Curlew *Numenius americanus*	WL LACBSSC	No records, but occurs as uncommon transient at Ballona Wetlands, Del Rey Lagoon.	Moderate; could occur in migration and winter at Oxford Basin/Wetland Park with restoration of mudflat and low saltmarsh vegetation.	–

Special-Status Species	Protection Status	Recent Occurrence at MdR	Restoration Potential	Notes
California Least Tern *Sternula antillarum browni*	Endangered (CA/Fed); FP	During breeding season (late Apr. - Aug.), birds from nesting colony at south Venice Beach adj. to MdR forage in open saltwater of marina; possibly also occurs at Oxford Basin.	Moderate; could occur at Oxford Basin, esp. with removal of trees/conversion to a lower-profile habitat and improvement in water quality/populations of small fish (should be investigated).	–
Burrowing Owl *Athene cunicularia*	CSC	No (recent) records.	Could be re-established at edge of Ballona Wetlands Area A provided large trees and shrubs (esp. non-natives like eucalyptus) are removed, shorter vegetation is maintained, and California Ground-squirrels *Spermophilus beecheyi* are retained. Oxford Basin/Wetland Park probably too small to support this species, though transients could occur, esp. in fall.	–
Short-eared Owl *Asio flammeus*	CSC	No records from MdR proper, but occurs regularly at Area A of Ballona Wetlands adjacent to MdR (mainly fall/winter).	Removal of trees in and around Area A (Ballona Wetlands) would improve foraging habitat for this species; Oxford Basin/Wetland Park probably too small to support this species, even in migration.	–

Special-Status Species	Protection Status	Recent Occurrence at MdR	Restoration Potential	Notes
Loggerhead Shrike *Lanius ludovicianus*	CSC	Occurs regularly as a post-breeding visitor (July-Jan.) at Ballona Wetlands Area A; formerly occurred year-round throughout (incl. Oxford Basin), and bred widely.	Removal of trees in and around Area A (Ballona Wetlands) would improve foraging habitat for this species.	–
Clark's Marsh Wren *Cistothorus palustris clarkii*	CSC	No records.	Moderate; could occur in non-breeding season (Aug. - Mar.) at Oxford Basin with removal of non-native myoporum and establishment of lower-profile vegetation; could occur as a breeder at either Oxford Basin or Wetland Park with establishment of reedbeds.	–
Yellow Warbler *Dendroica petechia brewsteri*	CSC	No breeding records; very common in migration, when not considered sensitive.	N/A - this species did not historically breed in the Ballona area (Cooper 2006), and therefore its restoration would not be appropriate.	–
Yellow-breasted Chat *Icteria virens*	CSC	No records, though historically bred in Venice Marshes (Cooper 2006).	Small numbers likely occur during migration at Oxford Basin/Wetland Park, especially with introduction of low, dense riparian vegetation; nesting requirements far more strict (extensive riparian scrub near grassland), and unlikely to occur as a breeder.	–

Special-Status Species	Protection Status	Recent Occurrence at MdR	Restoration Potential	Notes
Belding's Savannah Sparrow *Passerculus sandwichensis beldingi*	Endangered (CA)	No records in MdR proper, though maintains a small resident population (c. 12 pr) at Area B of Ballona Wetlands and occurs as a non-breeding visitor to Area A.	Establishment of any tidal marsh at Area A could attract this species as a breeding resident; unrecorded at Ballona Lagoon, so probably unlikely to occur at Oxford Basin/Wetland Park even with restoration.	–
Western Meadowlark *Sturnella neglecta*	LACBSSC	Probably a regular transient/winterer, if not resident, at Area A of Ballona Wetlands; breeding resident in Area B. One record (fall 2009) from Oxford Basin (Cooper unpubl. data).	Removal of trees in and around Area A (Ballona Wetlands) would improve foraging habitat for this species; Planting of low scrub and grassland at Oxford Basin/Wetlands Park should support this species in migration.	–

Local Interest Species	Protection Status	Recent Occurrence at MdR	Restoration Potential	Notes
Northern Shoveler *Anas clypeata*	–	No records; common at Ballona Freshwater Marsh (BFM).	High; could occur at Oxford Basin/Wetland Park (Sept. - Apr.) with establishment of shallow-water wetlands. Likely at restored Ballona Wetlands.	–
Northern Pintail *Anas acuta*	–	No records; uncommon at BFM.	High; could occur at Oxford Basin/Wetland Park (Sept. - Apr.) with establishment of shallow-water wetlands. Likely at restored Ballona Wetlands.	–
Cinnamon Teal *Anas cyanoptera*	–	No records from MdR; common at BFM, uncommon at Ballona Lagoon and Del Rey Lagoon.	High; could occur at Oxford Basin/Wetland Park (Aug. - May.) with establishment of shallow-water wetlands; breeding possible (Apr. - June) at either site with addition of reedbeds. Likely at restored Ballona Wetlands.	–
Redhead *Aythya americana*	–	No records; uncommon at BFM.	Med.; could occur at Oxford Basin/Wetland Park (Sept. - Apr.) with establishment of shallow-water wetlands, though generally uncommon in region.	–

Local Interest Species	Protection Status	Recent Occurrence at MdR	Restoration Potential	Notes
Ruddy Duck *Oxyura jamaicensis*	–	No records; common at BFM.	High; could occur at Oxford Basin/Wetland Park (Aug. - May.) with establishment of shallow-water wetlands; breeding possible (Apr. - June) at either site with addition of reedbeds. Likely at restored Ballona Wetlands.	–
California Quail *Callipepla californica*	–	Few recent records; formerly resident at Ballona Wetlands Area A (into 1980s, Cooper 2006).	Highly sedentary, but could be re-established (through reintroduction?) at Area A; Oxford Basin too small to support a population.	–
Green Heron *Butorides virescens*	–	Year-round resident at MdR, currently nesting in small numbers in ornamental trees, especially near fresh water.	N/A - already occurs.	Removal (or trimming) of any dense-foliaged tree in MdR during nesting season should be surveyed for this species.
Sora *Porzana carolina*	–	No records, but occurs in migration and winter in Ballona-area wetlands.	High; could occur at Oxford Basin/Wetland Park (Aug. - May.) with establishment of shallow-water wetlands.	–
Common Moorhen *Gallinula chloropus*	–	No records, but resident in Ballona-area wetlands, recently (since 2008) breeding.	Low; strictly occurs in freshwater, so unless this habitat is created somewhere at MdR (along with reedbeds), unlikely to occur.	–
American Coot *Fulica americana* (breeding)	–	Though common in winter, it is scarce in late spring/summer, and probably does not nest.	Breeding possible (Apr. - June) at Oxford Basin/Wetland Park with addition of reedbeds.	–

Local Interest Species	Protection Status	Recent Occurrence at MdR	Restoration Potential	Notes
Black-necked Stilt *Himantopus mexicanus*	–	Few (no?) records; common elsewhere in Ballona area (esp. upper Ballona Creek).	High; could occur at Oxford Basin/Wetland Park with establishment of shallow-water wetlands. Breeding possible with construction of sand/mud islet (surrounded by water). Likely at restored Ballona Wetlands.	–
American Avocet *Recurvirostra americana*	–	No records; uncommon transient in Ballona area.	High; could occur at Oxford Basin/Wetland Park with establishment of shallow-water wetlands. Breeding possible with construction of sand/mud islet (surrounded by water). Likely at restored Ballona Wetlands.	–
Tree Swallow *Tachycineta bicolor*	–	Not recorded in MdR, but a fairly common transient and uncommon winter visitor elsewhere in local area; nests in boxes at Ballona-area wetlands. Widely extirpated as a breeder in southern California, during the past 20 years has become reestablished in many areas, often using nest boxes (Unitt 2004).	High; could colonize nest boxes in Marina del Rey adjacent to natural open space areas. With CDFG, County should evaluate whether to potentially establish boxes in any parts of the marina.	If nest boxes are installed, their design must effectively exclude non-native House Sparrows, which could predate Tree Swallow nestlings[12]. Boxes would need annual maintenance to remain beneficial to swallows.
Hutton's Vireo *Vireo huttoni*	–	Few records, but has recently wintered (1 bird) at Oxford Basin.	Low; plantings of native willows could result in additional wintering birds.	–

[12] Please see http://www.treeswallowprojects.com/spardam.html

Local Interest Species	Protection Status	Recent Occurrence at MdR	Restoration Potential	Notes
Black-headed Grosbeak *Pheucticus melanocephalus* (breeding)	–	No recent breeding records, though common in migration.	Low; tends to nest in mature willow woodland; however, it is possible that a small number could nest in dense, lush ornamental vegetation.	–
American Goldfinch *Carduelis tristis* (breeding)	–	No records, though common in fall, winter in Ballona area.	High; introduction of native willow scrub could result in its re-establishment as a breeder.	–
Yellow-headed Blackbird *Xanthocephalus xanthocephalus*	–	No records, though uncommon transient in Ballona-area wetlands.	Low; strictly occurs in freshwater, so unless this habitat is created somewhere at MdR (along with reedbeds), unlikely to occur.	–

4.0 Management Concerns with Colonial Waterbirds & Sensitive Species at Marina del Rey

4.1 Review of the Potential for Human Disturbances of Waterbird Nesting Colonies in Marina del Rey

A substantial body of research exists around the topic of human disturbance of colonial waterbirds (e.g., Parnell et al. 1988, Rodgers and Smith 1995, Carney and Sydeman 1997, Skagen et al. 2001, Naylor and Watt 2004). Nearly all studies have evaluated colonies in wilderness areas, natural parks, and other non-urban areas, and they have generally found that human intrusions near colonies adversely affect nesting birds. The impact of pedestrians is reportedly greater than the impact of vehicles, and disturbances early in the nesting season generally have greater impacts compared with disturbances later in the season. In a lengthy and detailed commentary, however, Nisbet (2000) discussed various lines of evidence indicating that nesting waterbirds generally tolerate various forms of disturbance in areas where humans are regularly present without posing an immediate threat of harm. He argued that previous studies and overviews concerning putative human disturbance of nesting colonial waterbirds generally lacked scientific rigor, and one of his conclusions was that, "Contrary to prevailing opinions, there is little or no scientifically acceptable evidence that gulls or herons are substantially affected by human disturbance."

In a study by Grubb (1979), existing noise levels were measured in a large mixed species heron rookery in St. Paul, Minnesota. As summarized on Page 53:

> A small plane then flew over the rookery at elevations ranging from 150 to 800 feet above the ground. Calculated maximum noise levels from this plane were 9 dBA greater than calculated existing maximum noise levels from aircraft and 20 dBA greater than measured existing maximum noise levels. There was no response from the nesting birds to either the increased noise levels or the presence of the aircraft. The fact that these birds are currently residing in an urbanized environment may have resulted in their habituation to noise disturbances.

Traut and Hostetler (2003) reported significantly less alert/fleeing behavior for Great Blue Herons and other waterbirds along developed versus undeveloped shorelines in central Florida, indicating habituation to human presence.

The Great Blue Heron colonies of southern coastal British Columbia have been the subject of the most detailed studies and ongoing monitoring programs anywhere on the Pacific coast of North America[13]. Vennesland (2000) was the first to show experi-

[13] See, for example: http://www.stanleyparkecology.ca/programs/conservation/urbanWildlife/herons/monitoringReports/SPHeronryReport2008.pdf

mentally that herons habituate to non-threatening human activity near breeding areas through the season (i.e, herons become more difficult to disturb as the nesting season wears on, presumably reflecting increased investment of time and resources toward nesting). This had been suggested earlier by Vos et al. (1985), who studied Great Blue Heron response to human disturbance in Colorado.

Vennesland (2000) and Vennesland and Butler (2004) studied the effects of disturbances from humans and predators (mainly Bald Eagles *Haliaeetus leucocephalus*) at 35 Great Blue Heron breeding colonies in the Vancouver area during 1998 and 1999. As noted by Vennesland (2000:82), "Most colonies were located away from roadways, so the dominant form of human disturbance at heron colonies was therefore of a pedestrian nature." Breeding abandonment accounted for 96% of the variation in productivity among colonies, and was due to eagle disturbance and, to a lesser degree, human disturbance. The level of response varied significantly among colonies, indicating different perceptions of risk, and varied significantly with the level of urbanization near colonies. Only a few episodes of nest abandonment were identified as being human-caused, or were indirectly related to novel human activities near colonies:

> [Colony 10] was disturbed by chain sawing and lawn mowing on 31 March, 6 April and 27 May, 1999, and breeding herons abandoned the site for the remainder of the season when heavy land-clearing machinery was operated within 50m of the colony edge on 30 June. Novel human disturbance was indirectly linked to the abandonment of one colony in 1998 (Colony 33, Appendix 1) and one colony in 1999 (Colony 4, Appendix 1). A golf course was built within 100m of Colony 33 in 1996 and 1997, and this event was followed by colony abandonments in 1997 and 1998 (directly linked to eagles in 1998). At Colony 4 in 1999, the cutting of trees occurred within 50m of the colony edge in the week prior to the abandonment of the colony, although this event was not directly observed, and eagles attacked the colony closer to the date of abandonment. Two other novel disturbances were documented, but the original response of the herons to the disturbance was not witnessed. Propane powered bird scare devices were set up within 100m of Colony 14 in 1999, and dike repairs were conducted within 100m of Colony 27 in 1998. In both cases the herons apparently habituated to these repeated and mechanical disturbances because they continued to breed after these events. Apart from Colony 10, no nest abandonment due directly to human disturbance was documented. Other human disturbances that had no obvious impact, beyond provoking a response from herons, included gunshots (n=3), a rock concert, and low flying planes (n=2). (Vennesland 2000:32).

Discussing a more focused investigation of the effects of human pedestrians upon ten Great Blue Heron nesting colonies in the same part of British Columbia, Vennesland (2000:70) reported that the herons at one colony "never responded to any human disturbance, presumably due to the continuous human presence below and around the colony."

All of the waterbird colonies at Marina del Rey are located near busy roads, apartment complexes, and other distinctly urban features, and the area lacks Bald Eagles or other comparable predators on adult or nestling tree-nesting waterbirds. Thus, conditions at

Marina del Rey are much different than the typical conditions in British Columbia or in most other areas that have been selected for scientific evaluation of disturbance effects upon waterbird colonies.

A thorough review of the literature shows that the great majority of studies have examined the typical situation of people influencing bird behavior at nesting colonies outside of urban areas. For example, Carney and Sydeman (1997) "reviewed 64 published investigations concerning effects of human disturbance on nesting colonial waterbirds" and identified "three main categories of human disturbance": scientific investigators, ecotourists, and recreators. In addition to several pointed criticisms of their review by Nisbet (2000), we note that the categories identified by Carney and Sydeman make sense only because the studies in their review were limited to evaluating disturbances resulting from people intruding upon largely natural areas. The inclusion of urban-adapted colonies would necessitate identification of a fourth category of potential human disturbance, from people going about their normal business in an urban setting. As discussed by Nisbet (2000), there is no reason to suspect that such routine, non-threatening activities represent significant sources of disturbance to urban-adapted colonies (at least not in coastal southern California, where such colonies are generally thriving and proliferating, and where such serious heron predators as Bald Eagles are absent).

In San Diego County, Unitt (2004) noted that "the Great Blue Heron has become thoroughly integrated into the domesticated environment. Many colonies are directly over places heavily trafficked by people, the nesting birds being indifferent to human activity below." With respect to the Black-crowned Night-Heron, Unitt noted, "All the major colonies are in planted trees in areas heavily used by people [and] the night-herons are surprisingly indifferent to people, especially while they are foraging at night." In a monitoring report on the Great Blue Heron colony near Villa Venetia in Marina del Rey, Keane Biological Consulting (2007) reported, "Dredging activities observed in February 2003 within 200 feet of heron nests located in pine trees west of the U.S. Coast Guard Station did not result in visible disturbances or nest abandonment." Echoing the earlier findings of Grubb (1979), biologists from the Chambers Group (2008) found that the herons and egrets nesting along Admiralty Way in Marina del Rey "successfully breed in situations that regularly exceed 110 dB." Similarly, Hamilton Biological, Inc. (2010; see Appendix G to this plan) monitored the effects of construction noise on nesting Black-crowned Night-Herons (BCNH) at Burton Chace Park, collecting "additional evidence that herons can tolerate noise levels exceeding 85 dBA, at least later in the nesting season, when the birds have already invested considerable time and resources into the nesting effort (disturbances earlier in the season, before eggs are laid, could produce different results)."

Colonial waterbirds in Marina del Rey may tolerate high levels of noise and human activity associated with pedestrians, cyclists, boats, vehicles (including delivery trucks), and tall buildings because this flexibility enables them to nest in a wide variety of tree types and to forage and roost in various suitable habitats located close to their nesting trees (cf. Francis et al. 2009). It should be emphasized that these birds have necessarily habituated to various non-threatening human activities as a *precondition* of successfully colonizing Marina del Rey, where no location is far removed from routine human presence. Only the height of the trees in which the birds nest affords them effective separation from fairly constant human activity. The necessity of tolerating human activity around and below the nesting colony represents a fundamental difference between members of urban-adapted populations and individuals of the same species that breed in natural areas. Colonies in natural areas may include many members that are relatively sensitive to human intrusions, and those birds may abandon a colony to seek a more remote location if the colony experiences elevated levels of noise or human activity, especially early in the nesting season. Such relocation options are generally irrelevant to urban-adapted populations, whose members choose to nest in settings characterized by elevated levels of noise and human activity, such as parking lots, apartment complexes, and busy harbors and marinas. Birds easily disturbed by elevated levels of noise and/or human activity are unlikely to select urban nesting sites in the first place.

In natural (non-urban) areas, such as large refuges, managers typically attempt to avoid potential adverse effects of human activities upon waterbird colonies by establishing and enforcing a large “buffer zone” or “set-back” around the colony in which human activities are prohibited or strictly limited during the nesting season. For example, Vennesland (2000) recommended “a calculated set-back distance of 165m [to] protect heron colonies from pedestrian disturbance.” Not only would enforcing this type of set-back be infeasible in an urban setting, it is almost certainly unnecessary in the case of urban sites like Marina del Rey since the colonial waterbirds in question are finding food and successfully raising young despite high “background levels” of human activity. In fact, the very act of limiting non-threatening human presence around urban colonies could have the unintended consequence of causing the birds to react more strongly to the occasional—and inevitable—human intrusion than they currently do when such intrusions are routine and the birds become habituated to them. Such a scenario could lead to increased colony abandonment and reduced nesting success (see Nisbet 2000:327).

4.2 Potential Effects of Colonial Waterbirds Upon Other Species in the Marina del Rey Area

The literature on Great Egrets, Snowy Egrets, and Double-crested Cormorants does not identify any particular cause for concern that nesting populations of these species could have adverse effects upon other species found in and around Marina del Rey. Great Blue Herons and Black-crowned Night-Herons, however, are omnivores that are known to regularly consume other birds, including terns and shorebirds, in addition to their typical diet of fish and other aquatic prey. Thomas P. Ryan, who has monitored the California Least Tern colony at Venice for a number of years, reported the following (in litt.):

> To-date there has been one instance of a large-scale predation event [likely involving one or more Black-crowned Night-Herons], which occurred at the end of the 2004 nesting season. However, this was following heavy crow predation, and in what we now know to be a poor year for local anchovy stocks. It is doubtful that the terns would have been productive that year even without the heron incursion. Aside from that, the species have co-existed since the colony's formation in the 1970's. Herons and egrets are known predators on both adult least terns, their chicks and eggs. However, at both Venice and the nearby Port of Los Angeles colony (where herons nest in adjacent light towers) predation on terns by herons has not been considered to ever be a major factor in the success or failure of these colonies in recent years.

Indeed, American Crows depredated large numbers of eggs at Venice Beach during both 2008 and 2009 (Marschalek 2009, 2010), and this plan recommends policies aimed toward managing local crow populations. Despite a local history of generally benign coexistence between herons and terns, the literature contains many references to the opportunistic feeding habits of herons, especially those of the night-heron, and several representative examples are summarized below.

- Wolford and Boag (1971) inspected regurgitations from 96 nestling Black-crowned Night-Herons and found that 55% consisted of young birds, mainly Franklin's Gulls (*Larus pipixcan*).

- Collins (1970) reported on both the confirmed and apparent predation by Black-crowned Night-Herons of chicks belonging to Common Terns (*Sterna hirundo*) and Roseate Terns (*S. dougallii*) in New York in 1967 and 1968, including the disappearance of 33 chicks less than three days old in 1968.

- Hall and Kress (2008) evaluated the impact of Black-crowned Night-Heron predation on a restored tern colony in Maine. They found bird remains (Common Tern, Common Eider *Somateria mollissima*, gull (*Larus* sp.), and the legs of an unknown wading bird) in five out of 18 night-heron nests examined (28%). Nestling night-herons from three nests were fed tern chicks, but 92% of tern chicks known to have been eaten were fed to nestling Black-crowned Night-herons in one nest, including a degree of specialization among individual birds. No tern chicks fledged during the year of their study (1992) and night-herons were observed in the tern colony on multiple occasions. The results of this study suggest that individual night-herons within a single colony can pose a major threat to locally-nesting nesting waterbirds.

- The U.S. Fish and Wildlife Service, in a 2007 review of the Comprehensive Conservation Plan for the Seal Beach National Wildlife Refuge in northern coastal Orange County, California, stated, "The week of June 25, a great blue heron was observed taking four least tern chicks within the NASA Island colony" at the refuge.

Marschalek (2008), reporting on monitoring of California Least Tern colonies statewide in 2007, stated, "The main predators of least terns in 2007 were unknown species, black-crowned night-herons (*Nycticorax nycticorax*) and gull-billed terns (*Gelochelidon nilotica*)." Appendix B-6 in this report indicates that Black-crowned Night-Herons were documented as taking 168 Least Tern chicks at the Bolsa Chica colony in Orange County, with Great Blue Herons taking another six tern chicks at that location. Great Blue Herons and coyotes (*Canis latrans*) together took a total of 50 chicks at the Seal Beach National Wildlife Refuge. Great Blue Herons were documented or suspected of taking small numbers of chicks at additional colonies in San Diego County.

Marschalek (2009) reported 20 documented or likely Great Blue Heron depredations of California Least Terns and 16 by Black-crowned Night-Herons.

Marschalek (2010) reported that Great Blue Herons, Black-crowned Night-Herons, and Great Egrets were thought to have depredated California Least Terns at six, four, and two tern sub-colonies, respectively.

These cases illustrate potential problems that expansion of Great Blue Heron and Black-crowned Night-Heron colonies at Marina del Rey could cause for the existing California Least Tern colony at Venice Beach, a short distance southwest of Marina del Rey (see Figures 3–3, 3–9), or for ongoing efforts to re-establish another listed species, the Western Snowy Plover (*Charadrius alexandrinus nivosus*), as a nesting bird on local beaches. For these reasons, and because both heron species are highly adaptable and currently increasing in abundance as breeders in the Los Angeles region (including at Marina del Rey), this plan allows for biologists from State or federal resource agencies to potentially intervene (e.g., through tree pruning or removal, or through removal of "problem" individuals) if monitoring of the local ecosystem indicates that such management is clearly advisable. We recognize that herons, unlike American Crows, have not posed an important threat to the Venice tern colony to date, but this could change (as evidenced by the heron predation events documented or suspected at tern colonies in Ventura, Orange, and San Diego counties in 2008 and 2009). We consider the situation of herons nesting at Marina del Rey to be sufficiently novel as to warrant caution.

4.3 Potential Conflicts Between Humans & Colonial Waterbirds in Marina del Rey

Ongoing colonization of Marina del Rey by various colonial waterbirds has produced conflicts, and potential conflicts, between humans and birds (and between humans and humans) that the County seeks to resolve, to the extent possible, through development of this conservation and management plan. In the interest of identifying and understanding such issues, five main sources of potential conflict are briefly summarized here.

4.3.1 Nuisances & Costs to Residents, Workers, Lessees, and the Land Owner

Colonial waterbirds invariably produce considerable volumes of white, pungent guano, which is deposited beneath nesting and roosting trees and which may also form a fine mist and be carried some distance downwind. Apart from the adverse visual and olfactory effects on people who live or work near occupied trees, the guano is known to foul such land uses as swimming pools, lawns, planter beds, parking lots, and restaurants. Maintenance costs are incurred by the County and by those leaseholders who must constantly clean up after the birds, and some designated land uses, such as the parking lot between Villa Venetia and the Coast Guard Station, have essentially been given over to the birds. As shown in Figure 3–27 on Page 3–26, however, some residents are still assigned to park in this lot, which means that their vehicles are perpetually misted and splattered with guano.

4.3.2 Death of Trees Through Guanotrophy

Directly associated with the deposition of guano is the phenomenon of guanotrophy, a pathogenic condition in soils beneath heronries that has resulted from the excessive deposition and accumulation of bird excrement. Froke (2007) described the phenomenon in some detail, starting on Page 8.3:

> Stemming from heavy concentrations of excrement, guanotrophic soils adversely affect the welfare of the trees that uphold heronries. Generally marked as an excessive build-up of nutrients (e.g., potassium, ammonium) in underlying soils (or freshwater), the condition achieves phytotoxic levels as decreased pH generates (and donates) excess hydrogen ions, which in turn decrease the absorption of anions (e.g., phosphide, nitride, and chloride). Because of the lacking buffer capacity, vegetation growth is slowed and regeneration is inhibited (see Salisbury and Ross 1969). Further, increased soluble salts will adversely affect water potential at the roots of trees (Wiese 1978); also see Gillham (1956) and Weseloh and Brown (1971). And very recently, from DNA microarray analysis, Hess *et al.* 2006 have offered new insights to the interaction of potassium and ammonium in soils that help explain the troubling toxicity associated with guanotrophism underneath heronries. For discussion of the specific effects of *cormorants* on heronry vegetation, see for example Cuthbert *et al.* 2002.

Froke's report also reviewed several case studies in which heronries have been seriously compromised by the killing of trees through guanotrophy. At the Villa Venetia parking lot, one large Monterey cypress that Great Blue Herons had used for nesting for several years apparently succumbed to guanotrophy in 2008, toppling over and crushing an automobile. As shown in Figures 3–25 and 3–26 on Page 3–24, the two remaining cypress trees used by nesting herons and cormorants have been nearly reduced to leafless snags; one of them is now leaning dangerously toward the Villa Venetia structure. Both trees appear to be doomed. Other nesting trees in the marina (ficus, eucalyptus, melaleuca) do not appear to be as susceptible to guanotrophy as do the three cypresses discussed above, so this problem may prove to be limited in scope.

4.3.3 Potential Health Risks

Airborne particles of guano could pose a health risk to local residents or workers through a bacterial infection known as psittacosis. Although rarely encountered outside of such arenas as pet shops and parrot-breeding operations, psittacosis warrants consideration in the context of Marina del Rey's urban heronries because this infection can cause pneumonia and other serious health problems for humans (Harkinezhad et al. 2009). Froke (2007) addressed this topic starting on Page 8.7:

> Psittacosis, also known as Parrot Fever and Ornithosis, is a bacterial infection of humans that can cause severe pneumonia and other serious health problems. It is caused by *Chlamydophila psittaci*, formerly known as *Chlamydia psittaci*. In birds, psittaci infection is referred to as AVIAN CHLAMYDIOSIS (AC). Chlamydial infections have been reported from at least 159 species of wild birds in 20 orders, but most isolates have been made from six groups of birds. Although Psittacine birds such as parrots and macaws are most popularly identified with this disease, pigeons, waterfowl, and herons are the most commonly infected wild birds in North America.
>
> The Chlamydophila organism is excreted in the nasal discharges and feces of infected birds and can remain infective for several months. Human infection commonly occurs from inhaling the bacteria in airborne particles from feces or respiratory exudates. Because of the organism's resistance to drying, infected guano at roosts is especially hazardous. Ornithologists who study wild parrots and are exposed to airborne fecal particles that can be transported with neonates' powder down, and persons who are excessively exposed to heronries, cormorant rookeries and other wading bird colonies where there may be infected birds are among those with a particular risk of psittaci infection.

4.3.4 Potential Conflicts with Natural Resource Management

As reviewed in Section 4.4, Great Blue Herons and Black-crowned Night-Herons are known to prey upon smaller birds, including the endangered California Least Tern, which maintains a nesting colony on Venice Beach. Predatory herons or egrets could also potentially hinder ongoing efforts to encourage re-establishment of a nesting colony of another listed species, the Western Snowy Plover, on one or more local beaches. These threats may or may not be so serious as to warrant efforts to actively limit the local heron nesting populations, but this plan allows for the possibility of actively managing heron (or egret) populations (e.g., through tree pruning or removal, or through removal of "problem" individuals) if monitoring of the local ecosystem indicates that such management is clearly advisable.

Additional possible conflict might arise between one theoretical group of people seeking to encourage the establishment of heron, egret, and cormorant nesting colonies across as large an area of Marina del Rey as possible and others, including the authors of this plan, who consider it more ecologically appropriate and desirable to work toward establishing habitats that will allow for the perpetuation of existing waterbird nesting populations while also encouraging the re-establishment of species that have been extirpated, or nearly extirpated, from the Marina del Rey area.

4.3.5 POTENTIAL CONFLICTS WITH PLANNED HUMAN LAND USES

Marina del Rey represents a nearly pure example of a "built environment." Its non-native landscape requires constant upkeep, including irrigation, and the area is subject to periodic redevelopment as buildings become obsolete, trees die, and planners and managers reevaluate land use priorities. Waterbird nesting colonies also shift and potentially expand over time, in many cases unpredictably, and there must be a mechanism in place to enable County personnel to effectively manage the marina without taking on an unacceptable level of risk that a shift in the location of a colonial waterbird nesting colony will indefinitely forestall the implementation of costly and needed redevelopment plans.

4.4 Effects of Human Disturbance on Sensitive Species

Table 3–5 lists bird species of conservation concern in known to occur in Marina del Rey, or that are believed to have the potential to occur there, and Section 6 describes conservation policies that could benefit some of these species. Although human actions greatly impacted local populations of many of these species historically, few sensitive species other than colonial waterbirds occur at the Marina today, and those that do either use the site only marginally (e.g., the California Least Tern) or have shown themselves to be highly tolerant of humans (e.g., the California Brown Pelican); thus, human disturbances at Marina del Rey probably have little ongoing effect upon these species. Should future restoration result in the establishment of additional sensitive species, potential effects would have to be evaluated.

5.0 MARINA-WIDE MANAGEMENT RECOMMENDATIONS

This section provides guidance for managing the Marina del Rey landscape and associated waterbird colonies to achieve the plan's interrelated goals of:

1) allowing for the effective conservation of biologically sensitive bird species that occur, or that have occurred, in the local area;

2) identifying management practices conducive to maintaining local breeding populations of colonial waterbirds;

3) eliminating or minimizing conflicts with appropriate and intended human uses of Marina del Rey; and

4) promoting the enjoyment of nature for residents and visitors to Marina del Rey.

These Management Recommendations would apply throughout Marina del Rey, establishing a planning framework that takes into account all of the relevant information and analyses, and that establishes best management practices tailored to Marina del Rey's resources and land uses.

5.1 Management Recommendations for Waterbird Colonies

Because of the available habitat, and itinerant and unpredictable nature of waterbird colonies, nearly all trees in Marina del Rey must be considered potential nesting habitat for colonial waterbirds. Since maintaining habitat conditions in a manner consistent with the perpetuation of existing waterbird colonies at self-sustaining and ecologically appropriate levels is a stated goal of this plan, we provide recommendations for a management approach that will help to achieve this goal.

As part of developing this plan and recommendations we reviewed the 2009 *Guide to Bird-Friendly Tree and Shrub Trimming and Removal* prepared by the Los Angeles Audubon Society. This booklet contains many accurate and useful discussions of bird-nesting, legal prohibitions against disturbing nesting birds, methods of finding nests, and other relevant topics. For this reason, we provide a current link to this online publication in the Literature Cited section of this plan. We have some concerns, however, that these guidelines characterize as "excessive" certain types of pruning that may, in some cases, legitimately be necessary to maintain the health of a tree or to ensure public safety. For example, Page 8 of the guidelines advises against "Removing dead palm fronds that drape down around the trunks of palm trees." We believe there may be valid reasons to remove dead fronds in inhabited areas where they could fall on people, cars, or buildings. It is our opinion that decisions about how to maintain healthy and safe landscape trees should typically be made by qualified arborists or other landscaping specialists, within the limits set by the Department of Beaches and

Harbor's Policy No. 23, "Tree Pruning in Marina del Rey and on County Beaches in Accordance with Native Bird Breeding Cycles." As discussed later in this plan, we have recommended strengthening this policy by requiring the review and approval of a biologist before any non-emergency pruning that would impact a waterbird nest (i.e., during the non-breeding season).

Appendix B of Audubon's guidelines, "Special Consideration, Herons & Egrets," and "Special Consideration, Cormorants," sets forth some of the claims about the putative sensitivity of all nesting colonial waterbirds to human presence. For example:

> When conducting surveys or inventories, individuals should take caution to avoid walking into heronries, especially under nesting trees (indicated by the ring of white guano around the base of the tree). Should they find themselves within a heronry, one should quietly and quickly leave by the same route they entered.

As reviewed in detail in Section 4.1 of this plan, such caution may be warranted in natural areas where herons, egrets, and cormorants may seldom be approached by people, but there is no evidence that the routine, legal activities of people in urban areas have any substantial effect upon the colonial waterbirds that select such areas for nesting.

The approach to tree management presented in this conservation and management plan builds upon the Department of Beaches and Harbor's existing (2006) Policy No. 23, "Tree Pruning in Marina del Rey and on County Beaches in Accordance with Native Bird Breeding Cycles." Its stated goal is "To establish guidelines in consideration of the great blue heron (*Ardea herodias*) and other breeding bird species to reduce or eliminate impacts on their nesting habitats." This policy, which has been in place since 2006, appears to be thorough and well-conceived. Either coincidentally or not, waterbird nesting colonies have increased and spread to new parts of Marina del Rey, part of a regional phenomenon reviewed in Section 3.3 and Appendix C of this plan. Nor has pruning "pushed" birds out of old nesting areas and into new ones; for example, the apparent shift in nesting locations along Admiralty Way by Black-crowned Night-Herons does not appear to have resulted from pruning of trees nearby (and the subsequent displacement of herons), as the eucalyptus trees the birds had been using north of Oxford Basin have retained their canopies and the old nests could still be seen in these trees in 2009. Therefore, this plan does not recommend any changes to the existing tree-pruning policy, which has allowed for the expansion and diversification of waterbird colonies while accommodating needed maintenance of trees.

We recognize, however, that most waterbird colonies in Marina del Rey are in some degree of conflict with intended human uses of the marina, and that the public and regulators seek assurance that such conflicts will not eventually lead to persecution of the birds through disturbance of their nesting trees. We believe that such assurance can be provided by amending the County's existing (2006) tree pruning policy, as outlined and discussed in Sections 5.1.1 and 5.1.3 (see Appendix E). Also, the County has adopted our recommendation to enforce similar tree pruning policies on leaseholds (see Appendix F).

5.1.1 Summary of Management Assumptions & Concepts

The following numbered points provide a concise summary of information discussed at length elsewhere in this report and outline the basic rationale behind our management recommendations. We believe this summary will be useful in helping readers understand the basis for management recommendations presented later in this section.

1. In 2009, after at least five years with generally increasing numbers and diversity of nesting colonial waterbirds at Marina del Rey, we conducted the first marina-wide census of nesting areas and population sizes for Double-crested Cormorants, Black-crowned Night-herons, Great Blue Herons, Great Egrets, and Snowy Egrets. These species appear to be thriving at the marina, and each of their local populations exists at relatively high levels for Los Angeles County and elsewhere along the coast of southern California.

2. Nesting herons, egrets, and cormorants, while not present historically at the marina, are thriving there now, and should be given the opportunity to continue to occur and nest so long as their presence is compatible with (a) other species of conservation concern in the local area (b) human usage of the marina.

3. Waterbird nesting colonies are scattered throughout the marina, subject to change from year to year, and do not always occur where they might be expected. This dynamism and lack of predictability prevent us from identifying the area's "sensitive" resources; only through periodic review can this question be answered at any given time. An effective management strategy should consider all trees in Marina del Rey as having potential to support nesting in the future.

4. Some species of colonial waterbirds, including the Great Blue Heron and Black-crowned Night-Heron, have been shown to negatively impact nesting of other species by preying on nestlings. This may be related to the size and proximity of the nesting colony of the depredating waterbirds. Each situation is different, which necessitates a case-by-case, adaptive-management approach.

5. At the Venice California Least Tern colony, predation by American Crows has presented serious management problems in recent years. Therefore, appropriate measures should be taken to discourage the proliferation of crows and other omnivorous species in Marina del Rey (and elsewhere in the local area).

6. We recommend against installing more non-native trees that could provide additional waterbird nesting substrates, and against providing man-made structures for nesting waterbirds at Marina del Rey due to (a) lack of evidence that these species

nested in the local area historically; (b) potential conflicts between colonial waterbirds and species of conservation concern in the local area, especially the California Least Tern; and (c) potential conflicts between colonial waterbirds and established human uses of the marina. We also recommend against replacing nesting trees with new nesting trees if they should be rendered unusable through natural/normal use by the birds (e.g., "guanotrophy" of the nesting trees at the end of Fiji Way) or acts of nature. Rather, to the extent possible, we prefer allowing natural processes to guide habitat management decisions marina-wide.

7. For public safety, tree health, and to allow intended human uses of the marina, trees must occasionally be pruned or removed. This must be done in accordance with State and federal law. With regard to these activities, the colonial waterbirds that nest in Marina del Rey enjoy the same legal protections afforded to nearly all other native bird species (i.e., active nests may not be disturbed).

8. The general expansion and diversification of Marina del Rey's waterbird colonies achieved under the County's existing (2006) tree-pruning policy lead us to conclude that this bird-friendly policy effectively supports the continued existence of colonial waterbirds in the marina.

9. Nevertheless, because colonial waterbirds are extremely visible, popular, and charismatic components of Marina del Rey and nearby areas, and in light of ongoing potential for serious conflicts between nesting colonies and legitimate human uses of the marina (such as the current situation involving dying cypress trees at the end of Fiji Way), we believe that a more formalized management approach for the area's waterbird colonies is warranted.

10. First, we have recommended that the County's existing (2006) tree-pruning policy be extended to cover all leaseholders in Marina del Rey (the 2006 policy applied only to the County itself and new or renewing leases, but not to leaseholders in good standing with the County). The County has adopted this recommendation, and the new tree-pruning policy for lessees is included as Appendix F to this plan.

11. Second, in cases where a waterbird nest might be removed or rendered unusable as a result of pruning that an arborist deems necessary to promote the health of the tree (as permitted under the County's existing tree-pruning policy), we recommend that the policy be amended to specify that a County biologist, or County-contracted biologist, review and approve the proposed pruning. The purpose would not be to second-guess the arborist, but to provide an appropriate level of administrative biological review before actions are taken that could potentially disrupt waterbird nesting in future years. Pruning deemed necessary for to alleviate an immediate threat to public safety would not be subject to this additional review.

12. We recommend that the County conduct waterbird population surveys, preferably on an annual basis, that would be needed in order to track the status of colonies and to provide current information on the locations of active nests to the public, the County, resource agencies, and other regulators.

13. We also recommend that the County conduct periodic nesting colonial waterbird surveys (e.g., every 3–5 years) throughout the coastal slope of Los Angeles County to establish a regional context for the Marina del Rey colonies. For example, the Snowy Egret is known to breed in fewer than five locations on the coastal slope of Los Angeles County, with Marina del Rey supporting one of the larger colonies. Should this continue to be the case, special care should be taken around the marina's Snowy Egret colonies, to help preclude a regional population decline.

5.1.2 Recommended Approach to Evaluating Land Use Conflicts

Currently, conflicts between nesting colonial waterbirds and designated land uses are relatively benign at all but one of the primary waterbird nesting colonies in Marina del Rey (the colony near Villa Venetia). Given that nesting waterbird populations in the local area continue to expand and occupy new trees, potential exists for conflicts between nesting waterbirds and established human land uses in the future. The general guiding principle in addressing such conflicts should be that a colony be allowed to remain in place except in situations in which the birds' presence precludes or seriously impinges upon the primary intended use of the same area. The County should evaluate each situation and determine an appropriate response, if any.

In parks and park-like settings, such as Burton W. Chace Park or around the parking lot near Oxford Basin, the nesting waterbirds should generally be allowed to continue their activities unmolested, except as future native habitat restoration and normal maintenance require the reduction of non-native trees (to be done outside the breeding season).

In many cases, birds are causing only minor conflicts with a designated land use. For example, at the lightly-used parking lot along Admiralty Way near Oxford Basin, an appropriate response to the occupation of two large trees may be to temporarily designate limited "no-parking" zones beneath those trees and to identify alternate parking spaces elsewhere in the Marina, as needed (rather than to remove the trees outright, unless this is being done as part of native habitat restoration, for example). In the future, it could make sense to reconfigure the parking lots adjacent to Oxford Basin and Yvonne B. Burke Park, relocating the parking lots away from Oxford Basin and establishing passive parkland in the area closer to the Basin that is compatible for waterbird nesting and wildlife values of a restored Basin.

The only current land use conflict that appears to be highly problematic is at the Villa Venetia colony, where guanotrophy has killed one nesting tree and nearly killed the other two (creating a potential public safety hazard), and where constant deposition of guano has caused a small parking lot to be almost completely unusable by residents and Coast Guard employees while also creating a potential health risk from psittacosis. The remaining cypress trees at this location are in very poor health. The County has not made a final determination as to their disposition at the time of this writing.

Considering Marina del Rey's urban character, its abundance of trees, and the propensity of local herons and egrets to nest in a variety of arboreal settings, we expect that the potential will always exist for problematic land-use conflicts to develop in the marina environment. Such conflicts could include health risks (such as co-location with restaurant uses or risks to humans from airborne pathogens), safety risks (such as an unbalanced tree), and substantial interference with public amenities such as public parking or public walkways. In those limited circumstances, appropriate management responses could include pruning of trees during the non-breeding season to make them unsuitable as nesting substrates. Any such "directed pruning" should be done during the non-breeding season and in compliance with the existing (2006) tree-pruning policy, which allows the affected birds an opportunity to select among ample nesting trees elsewhere in the nearby area, as has already been documented with respect to guanotrophy and subsequent dereliction of cypress trees at Parcel 64. We expect that annual monitoring of the marina's nesting colonies recommended in this plan would include documentation of any apparent bird-human conflicts and recommendations for how they might be resolved in ways that best respond to both the goals of this plan as well as normal public health, safety, and public-access considerations.

5.1.3 Tree Management Recommendations

The following numbered paragraphs provide guidance for County personnel, contractors, lessees, and anyone else potentially involved in pruning or removing trees in Marina del Rey.

Note that, for most species, the "breeding season" generally extends from February through August. For species like the Great Blue Heron, however, breeding activities may start as early as December, and both Mourning Doves (*Zenaida macroura*) and hummingbirds may nest essentially year-round. Since removal of the active nest of virtually any native species represents a violation of State and federal law, all tree pruning or removal should be done in consultation with a trained biologist familiar with the relevant statutes and with this plan and its goals. Furthermore, as noted in Section 5.2, the "breeding season" for bats is considered to extend from March 1 to September 15.

1) Trees posing an immediate safety threat that cannot be avoided (e.g., falling over into traffic or fire-lane) should be pruned/removed immediately regardless of presence of nesting herons/egrets or other species. Notification should be

provided to the California Department of Fish and Game (CDFG) and U.S. Fish and Wildlife Service (USFWS) before any action is undertaken that might disturb any actively nesting birds, but these agencies typically do not block emergency actions needed to protect public safety.

2) Trees not posing an immediate safety threat or not otherwise impacting normal human use of the marina should be maintained in accordance with the 2006 tree-trimming guidelines. If a waterbird nest might be removed or rendered unusable as a result of pruning that an arborist deems necessary to promote the health of the tree (as permitted under the County's existing tree-pruning policy), a County biologist or County-contracted biologist should review and approve the proposed pruning. The purpose would be to provide an appropriate level of administrative biological review before actions are taken that could potentially disrupt waterbird nesting in future years.

3) In cases where a waterbird colony is fouling cars, landscaping, etc., but not apparently endangering public health, a temporary structure, such as a tarp or a tent supported by metal poles, may be erected below the colony, but the tree itself must not be disturbed during the breeding season as long as birds are involved in nest-building, nesting, or raising young there.

5.1.4 Recommendations for Managing Crows and other Omnivores

The following numbered paragraphs provide guidance for County personnel, contractors, lessees, and any other land managers in Marina del Rey to help reduce predation pressure upon native wildlife populations from American Crows and other omnivores currently thriving in the local area:

1) Crows prefer to nest in trees, so discouraging tree-planting would help reduce numbers over time.

2) Crows are scavengers, especially of garbage cans, so restricting trash cans to the covered type and ensuring prompt servicing during periods of heaviest use (such as over weekends, especially during summer) would help to reduce numbers of crows, rats, and other scavengers.

3) Restaurants should be required to maintain covered, well-functioning dumpsters that discourage crows, rats, and other scavengers.

4) The County should consider similar measures on beaches adjacent to Marina del Rey (e.g., Venice and Dockweiler) as well as trash-reduction policies for Ballona Creek, where large numbers of crows congregate.

5) Crows, like Raccoons, frequently "wash" their food, and they often use irrigation runoff in gutters to do so. This attractant could be mitigated by reducing irrigation, where possible, by replacing tropical plants with drought-tolerant landscaping.

5.1.5 Waterbird Monitoring Recommendations

It would be useful for the County to conduct waterbird population surveys, preferably on an annual basis, in order to track the status of colonies and to provide current information on the locations of active nests to the public, the County, resource agencies, and other regulators. This information would help the County and others to evaluate the adequacy of the conservation and management approach specified in this plan.

We also recommend that the County conduct periodic nesting colonial waterbird surveys (e.g., every 3–5 years) throughout the coastal slope of Los Angeles County to establish a regional context for the Marina del Rey colonies. For example, the Snowy Egret is known to breed in fewer than five locations on the coastal slope of Los Angeles County, with Marina del Rey supporting one of the larger colonies. Should this continue to be the case, special care should be taken around the marina's Snowy Egret colonies, to help preclude a regional population decline.

5.2 Recommendations for Biological Reports & Construction Monitoring

This section provides recommendations for measures to be implemented when construction is proposed anywhere in Marina del Rey. Our recommendations for biological reporting are patterned upon Section 4.4.2 of the City of Malibu Local Coastal Program/Local Implementation Plan. Our construction monitoring recommendations are patterned upon the conditions of Coastal Development Permit No. 5-08-242, issued by the California Coastal Commission in 2008 for the Oxford Basin low-flow diversion project.

5.2.1 Qualified Biologist

Since trees capable of supporting nesting birds of many species are now established throughout Marina del Rey, many types of construction projects and maintenance in the marina area will have at least some potential to impact nesting birds. Construction within the aquatic habitats of the marina itself (e.g., in tidal basins) also entails potential impacts to biological resources, mainly in the form of potential water-quality impairment and potential impacts to foraging waterbirds. Thus, in most cases, we believe it is important that any project proponent retain a biological consultant with appropriate credentials to participate in the planning and monitoring of construction projects in

Marina del Rey. Any biologist retained for this purpose should have read this plan and should possess a working knowledge of the County's resource protection policies.

5.2.2 BIOLOGICAL REPORTS

Applications for new development on property where the initial site inventory indicates the potential presence of colonial waterbirds, sensitive species, or sensitive habitat should include a detailed biological study of the site, prepared by a qualified biologist or other resource expert. At minimum, the biological report should include the following elements:

- A study identifying biological resources, both existing on the site and with potential to occur. The biological study should focus on species identified in Table 3–5 of this plan (Bird Species of Conservation Concern in Marina del Rey & Surroundings), on colonial waterbirds, and bats. In the absence of standard protocols, at a minimum, the area should be surveyed for two hours between dawn and 10:00 a.m. on five occasions with at least one week between surveys. If there is appropriate habitat for owls on site, at least one nocturnal survey should be conducted.

- It is unknown at this time whether any bats roost or reproduce in Marina del Rey. Bats are considered non-game mammals and are afforded protection by state law from take and/or harassment (Fish and Game Code Section 4150, California Code of Regulations, Section 251.1). It is recommended by CDFG that disturbances to bridge structures, tree cavities, and other potential bat nursery and roosting habitats be avoided between March 1 and September 15 to avoid the breeding season for bats. If disturbance of any bridges, or trees large enough to have cavities or exfoliating bark, during the bat breeding season, we recommend that a recognized bat specialist conduct a preconstruction survey.

- Photographs of the site.

- A discussion of the physical characteristics of the site, including, but not limited to, topography, soil types, microclimate, and wildlife use.

- Consideration of whether project implementation could affect any areas under the jurisdiction of the U.S. Army Corps of Engineers, CDFG, and/or Regional Water Quality Control Board. If this is possible, a qualified wetlands specialist should be consulted to evaluate the site and to coordinate with the relevant agencies to ensure compliance with all applicable federal and state permitting requirements.

- A map depicting the location of plant communities and other biological resources.

- An identification of rare, threatened, or endangered species, that are designated or are candidates for listing under State or federal law, an identification of "fully protected" species and/or "species of special concern," and identification of any other species for which there is compelling evidence of rarity, for example, plants designated "List 1B" or "List 2" by the California Native Plant Society, that are present or expected on the project site.

- An analysis of the potential impacts of the proposed development on the identified habitat or species.

- An analysis of any unauthorized development, including grading or vegetation removal that may have contributed to the degradation or elimination of habitat area or species that would otherwise be present on the site in a healthy condition.

- Project alternatives designed to avoid and minimize impacts to sensitive resources.

- Mitigation measures that would minimize or mitigate residual impacts that cannot be avoided through project alternatives.

5.2.3 Construction Timing

Since many types of projects will have potential to impact nesting birds, it is generally recommended that aspects of the project that have the greatest potential for such impacts be implemented during the "non-breeding season," which in the local area is between September 1 and November 30. This term cannot be taken literally in all cases since, for example, hummingbirds nest year-round and Great Blue Herons may exhibit breeding behaviors at virtually any time of the year. Note also that the bat breeding season is considered by CDFG to extend through September 15, although it is not known whether any bats actually breed in Marina del Rey. Nevertheless, the potential for substantial impacts is reduced during the specified period. If construction activities must take place near waterbird nesting sites during the nesting period, it is preferable that such impacts take place toward the end of nesting rather than toward the beginning, since waterbirds are more likely to abandon nests early in the nesting cycle.

5.2.4 Construction Near Waterbird or Raptor Nesting Sites

Typically, the project biologist should conduct an initial reconnaissance survey to determine whether any active waterbird or raptor nesting sites exist within 300 feet of proposed construction activities. The survey should include inspection of the ground for the guano stains typically present below waterbird nesting sites, but also careful inspections of all trees where nests might be placed.

If an active waterbird or raptor nest is found within 300 feet of construction, the following measures are recommended:

1. The project biologist should either possess noise-monitoring equipment or work in conjunction with a noise-monitoring consultant to measure noise levels at active nesting sites.

2. The project biologist/noise monitor should be present at all weekly construction meetings and during all activities with potential to generate noise over a threshold of 85 dB at any nest site. This includes such activities as hardscape demolition, pile-driving, and the use of chainsaws. The purpose of monitoring should be to ensure that nesting birds are not disturbed by construction related noise. Thus, the monitor should watch for any behaviors associated with noise disturbance, including flushing or other startle movements, changes in foraging or reproductive rituals, interrupted feeding of young, or nest abandonment. If any such behaviors are observed, the monitor should have the authority to stop work immediately so that measures may be taken to avoid any further disturbance.

3. As a guideline, noise levels from construction, measured at the nest, should not exceed 85 dB. Monitoring should be especially careful and intensive, and observations should be recorded in detail, when noise levels approach this level. Nevertheless, given that levels in excess of 100 dB have been recorded at heron and egret nests near Oxford Basin with no apparent adverse effects (Chambers Group 2008), there is no empirical evidence proving that 85 dB is a valid threshold above which birds nesting in an urban environment experience substantial disturbance. Still, the burden of proof should be placed upon the project proponent to demonstrate that a higher noise level can be safely tolerated. If constant, detailed monitoring of noise levels above 85 dB demonstrates that the birds show no evidence of being disturbed, construction should be allowed to continue. In such cases, the final monitoring report should contain relevant details about (a) the types, intensities, and duration of noises the birds were subjected to, (b) any observations of stress behaviors in response to noises or other disturbances, and (c) the nesting success of those birds *relative to other birds in the nearby area that were not subjected to the same elevated levels of construction noise*. If it turns out that birds subjected to elevated noise levels appear to possibly experience reduced nesting success despite a general lack of evident stress behaviors, the project proponent should not be subject to any penalties, but the monitoring results should be incorporated into a revised construction monitoring policy that takes these important results into account. Without detailed monitoring of this nature, we will never know the actual thresholds at which different nesting bird species experience substantial disturbance at urban locations such as Marina del Rey.

4. If stress behaviors are observed from nesting birds in response to any construction activity, the project biologist should be authorized to call for the implementation of such mitigation measures as sound shields, blankets around smaller equipment, mixing concrete batches off-site, use of mufflers, and minimizing or eliminating the use of back-up alarms. If these sound mitigation measures do not reduce noise levels enough to eliminate the observed stress behaviors, construction within 300 feet of the nesting trees shall cease and shall not recommence until either new sound mitigation can be employed or until nesting is complete. To the extent possible, the biologist's monitoring report should specify the sound levels at the nest at which the birds demonstrated stress behaviors.

5. Construction staging areas or equipment should not be located under any nesting trees.

6. Construction employees should be prohibited from bringing pets (e.g., dogs and cats) to the construction site.

7. Any lights used during construction should be shielded downward.

8. Although these recommendations refer specifically to waterbirds and raptors (because they tend to be most sensitive to disturbance), virtually all native birds are legally protected from disturbance while actively nesting. Therefore, the biological monitor should take all necessary steps to ensure that no native bird species are disturbed by construction activities.

5.2.5 Additional Controls on Construction Impacts

The project proponent should not be allowed to discharge silt or debris into coastal waters. Pursuant to this requirement, project plans should specify measures to minimize construction impacts. Plans should also identify acceptable locations for stockpiling and staging of materials; plans for control of erosion, stockpiled earth from trenches, and cement; as well as plans for the disposal of construction materials. Plans should include the following specifications, as applicable:

1. Delineation of the areas to be disturbed by grading or construction activities, including any temporary trenches, staging, and stockpile areas.

2. Best Management Practices as part of a written plan designed to control dust, concrete, demolition pavement, or pipe removed during construction, and/ or construction materials, and standards for interim control and for clean up. All sediment waste and debris should be retained on-site unless removed to an appropriate dumping location approved to receive fill.

3. Plans to monitor, contain, and clean/remediate oil or fuel leaks from vehicles or equipment.

4. Temporary erosion control measures to be employed should grading or site preparation cease for a period of more than 30 days, including but not limited to (a) filling or covering all holes in roadways such that traffic can continue to pass over disturbed areas; (b) stabilization of all stockpiled fill, disturbed soils, and trenches with shoring, sand bag barriers, silt fencing; (c) temporary drains and swales and sediment basins. These temporary measures should be monitored and maintained at least on a weekly basis until grading or construction operations resume.

Prior to commencement of construction, the project proponent should provide for the County's review and approval final plans and plan notes that conform to the County's requirements. Work should not be permitted to commence until the County approves the plans in writing.

6.0 Potential for Habitat Restoration in Marina del Rey

Section 3.7 identified bird species of conservation concern, including four "target species" (White-faced Ibis, Long-billed Curlew, California Least Tern, and Clark's Marsh Wren) that should be given highest conservation priority when conducting habitat restoration and habitat management in Marina del Rey. We also identified 16 "local interest species" that are known to have been extirpated or greatly reduced in number in the Ballona/West Los Angeles area, 10 of which have the highest chance of benefiting from habitat restoration at Marina del Rey: Northern Shoveler, Northern Pintail, Cinnamon Teal, Redhead, Ruddy Duck, Sora, American Coot (breeding), Black-necked Stilt, American Avocet, and American Goldfinch. Section 6.1 describes three open space areas that have good potential for improving habitat conditions for these identified "target" and "local interest" bird species, and Section 6.2 provides recommendations for how this may be accomplished.

We are not treating here the whole of Area A of the Ballona Wetlands east of Fiji Way, which some maps include as part of Marina del Rey, because its restoration and management is being contemplated by the State of California as part of larger Ballona Wetlands restoration. However, we acknowledge that Marina del Rey shares a border with this key open space parcel, and provide recommendations for the management of this border below.

6.1 Open Spaces in Marina del Rey with Highest Potential for Habitat Improvement

6.1.1 Oxford Basin

The Oxford Basin covers 10.7 acres on the north side of Marina del Rey (see Figures 3–3, 3–9). Its resources have never been adequately studied or assessed, though an early bird survey (1978–79) documented foraging by the endangered California Least Tern, and recent surveys (by the authors) indicate still-high usage by waterfowl in winter. The basin is brackish, fed by both storm drains and by a tide gate/culvert from the Marina del Rey basins, and is best considered "muted-tidal" (some tidal action, but never completely drains). Apparently a relict of the larger Ballona/Venice marshes, a narrow band of native saltmarsh vegetation (visible in Figure 6–1) has developed along its edges. Restoration that includes shallow-water wetland and coastal scrub communities would significantly improve both water quality and habitat conditions for wildlife in the marina. It would also greatly improve wildlife-viewing opportunities in the area; a very popular bike path runs along the eastern edge of the site, and hundreds of visitors a day could enjoy a restored Oxford Basin.

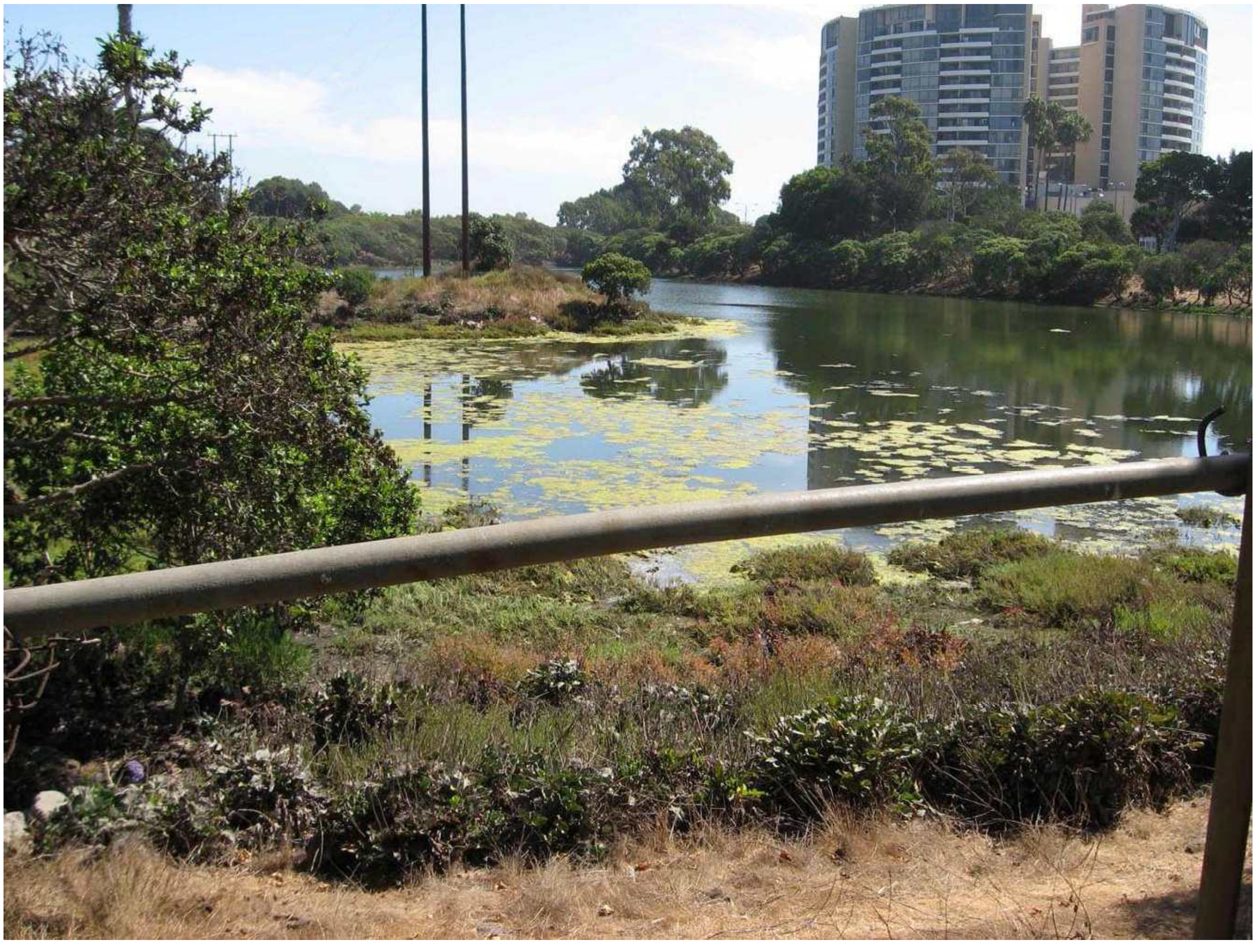


Figure 6–1. Photograph of Oxford Basin, view to the east, taken by DSC on 10 September 2009. Features visible in this photo include non-native myoporum shrubs (at left and on far shore), native pickleweed vegetation at water's edge, "redundant" fencing (foreground), algae on surface of water (lack of drainage encourages this during summer), and telephone poles along north side of lagoon. Nesting trees for herons and egrets are visible in distance.

Oxford Basin is an important foraging area for locally-nesting herons and egrets, and small flocks of waterfowl winter on the lagoon (November–March), especially American Wigeon (*Anas americana*) and Lesser Scaup (*Aythya affinis*). Landbird usage is light due to dominance of dense, non-native vegetation, but songbirds overwinter at the site and also occur during migration. While it is recognized that no other site in Marina del Rey has the potential to support significant usage by the "target species" and "local interest species" identified in this plan, all efforts to enhance habitat at Oxford Basin shall be coordinated with the LACFCD and shall not in any way compromise the operation of the basin as a flood control facility.

6.1.2 PROPOSED WETLAND PARK AT PARCEL 9

Figure 6–2, below, shows the location of a proposed 1.46-acre "wetland park" at the corner of Via Marina and Tahiti Way, in the southern portion of a 3.8-acre area known as Parcel 9.

Figure 6–2. Parcel 9, including the proposed "wetland park," is located on the west side of Marina del Rey, at the northeastern corner of Via Marina and Tahiti Way. A hotel is proposed for the northern 2.34 acres of this parcel.

Parcel 9 was the subject of a recent draft biological technical report, including a wetland delineation and fairy shrimp survey (Glenn Lukos Associates 2006a). Their report found that the parcel's northern part, a proposed hotel site, is vegetated primarily with upland ruderal species. The southern portion of the parcel includes an excavated depression, the site of a previous hotel project that went bankrupt early in construction. Dominant plant species in the excavated area are predominantly wetland indicators, both native and non-native, such as alkali weed (*Cressa truxillensis*), five-hook bassia (*Bassia hyssopifolia*), sickle grass (*Parapholis incurva*), red brome (*Bromus madritensis* ssp. *rubens)*, Bermuda grass (*Cynodon dactylon*), toad rush (*Juncus bufonius*), and alkali bulrush (*Scir-*

pus maritimus). At the southern margin of the basin is a berm made of spoil materials excavated from the basin, and this berm supports a stand of native narrow-leaved willow (also a wetland indicator) with an understory of non-native yellow sweet clover (*Melilotus officianalis*) and slender wild oat (*Avena barbata*).

Figure 6–3. Photograph taken on 30 July 2009 of the proposed wetland park area, in the southern portion of Parcel 9. View is to the west, toward Via Marina. The stand of narrow-leaved willow is visible at left, and the excavated area is at center. The concrete foundation of the unfinished hotel is also visible in this photo.

Glenn Lukos Associates identified a total of 0.26 acre in the southern part of the parcel that they regarded as potential jurisdictional wetlands under the U. S. Army Corps of Engineers' three-parameter wetland delineation methodology, and 0.47 acre that they regarded as potentially satisfying the California Coastal Commission's one-parameter wetland delineation methodology. They did not find fairy shrimp or any other biologically sensitive species on the parcel.

We are aware of reports from local residents of egrets visiting the Parcel 9 site, presumably to forage. Egrets, especially Great Egrets, forage across a wide range of habitats, and their presence at Parcel 9 would not be unexpected. Enhancement of the wetland park in the manner proposed would serve to increase foraging opportunities for egrets and other native bird species in this area.

6.1.3 Margin of Ballona Wetlands (Area A)

The open space of the Ballona Wetlands, Area A, lies south and east of a long border of Marina del Rey, along Fiji Way. This border is fenced (at times redundantly), and is characterized by open space, including native saltmarsh and coastal scrub elements on the east side, and ornamental landscaping on the Marina del Rey side (Figure 6–4).

Figure 6–4. Photograph taken by DSC on 10 September 2009, view to south from the shoulder of Fiji Way, showing the Ballona Wetlands (Area A) at left and Marina del Rey at right. Visible vegetation includes non-native and invasive castor bean (*Ricinis communis*) along the fence in the foreground, and mature eucalyptus and palms in the background. Clearly, actions taken to reduce the non-native vegetation along this margin would improve the ecological function of the open space on the left side of the fence.

The non-native trees and shrubs along the shoulder of Fiji Way detract from the ecological integrity of Area A, both by changing the landscape profile (causing it to be more woodland-like and less prairie- or marsh-like), and by sending out volunteer plants into the open space, where they multiply and invade what was once a native landscape.

The Ballona Wetlands (including Area A) could support both the Western Snowy Plover and Light-footed Clapper Rail, listed species that historically occurred in the local area, with the restoration of two habitat types: a regularly-wet saltpan (for the plover) and tidal saltmarsh (for the rail). Numerous other "target species" and "species of local interest" identified in this plan find their only habitat in the West Los Angeles area at the Ballona Wetlands, and these species typically favor low-profile, shallow-wetland and grassland habitats, rather than urban or otherwise built-up landscapes. Such open-country birds as the Burrowing Owl, Loggerhead Shrike, and Western Meadowlark would benefit from removal of the tall, non-native ornamental vegetation that exists along this interface.

Although it would be beyond the scope of this plan to anticipate specific future management of Area A, it is appropriate to highlight the potential ecological significance of Marina del Rey's border with the Ballona Wetlands, and to identify relevant issues as restoration proceeds in Area A. Thus, Section 6.2.3.2 includes recommendations for County maintenance crews to be made aware of CDFG recommended procedures when working at Ballona Wetlands Ecological Reserve to help ensure the success of ecological restoration actions in Area A and elsewhere in the Ballona Wetlands.

6.2 Conservation Policies for Potential Restoration Areas

This section provides guidance for how "habitat improvement" should be approached in each of the areas identified in Section 6.1. More detailed recommendations will be made in the future, once focused biological investigations are undertaken and the County's specific plans for each area have been refined, but the following policies provide guidelines for conservation actions that would help to achieve the overall conservation goals identified in this plan.

6.2.1 Conservation Policies for Oxford Basin

Oxford Basin's primary role is to receive storm runoff from and to provide flood control for the Marina and surrounding communities. As such, the Basin must be regularly maintained, including periodic removal of sediments. Opportunities exist to increase habitat values of Oxford Basin for various native plant and wildlife species, and to promote its enjoyment by residents and visitors to Marina del Rey. All efforts to enhance habitat, public enjoyment, or other aspects of Oxford Basin shall be subordinate to its primary role as a flood control facility.

6.2.1.1 Restore functional saltmarsh habitat

Most of the intertidal zone at Oxford Basin is currently vegetated with such native saltmarsh plants as pickleweed, sandmarsh sand-spurry (*Spergularia marina*), and salt grass (*Distichlis spicata*). Because these plants were not mentioned in earlier assessments (e.g., Schreiber and Dock 1980), it appears that they are naturally occurring here, temporarily displaced by the construction of Marina del Rey, and now regenerating within the Basin. Therefore, we recommend that this vegetation be preserved in place or stockpiled for later replanting during any reworking of the basin's sides.

The term "functional saltmarsh habitat" implies regular and, if possible, natural tidal flushing (corresponding to timing and magnitude of natural tidal cycles). A functional saltmarsh at Oxford Basin would, ideally, support a healthy sedimentary invertebrate fauna, to provide habitat for ducks and shorebirds, and a predictable population of small fish during the May–July nesting season for the California Least Tern, a listed species that maintains a large nesting colony on Venice Beach and that has been documented foraging at Oxford Basin in past years. Many other migratory and resident waterbirds would also benefit from the enhancement of this habitat, including those that currently utilize the nearby restored Ballona Lagoon.

To the extent possible, the Oxford Retention Basin Flood Protection Multiuse Enhancement Project (currently in design) should maintain the natural characteristics of the site. Once the final contours are established, habitat should be established to include areas of emergent native marsh vegetation exposed during high tide, to serve as refugia for animals, and areas of exposed mud ("mudflats") at low tide, to serve as foraging areas for migratory and resident birds. Although the extent of mudflats may be limited by engineering constraints, including at least a band of this habitat at low tide would be valuable, considering how much mudflat habitat was lost during construction of Marina del Rey, and how vital such areas are for a wide variety of native wildlife, including birds, mollusks, and other intertidal invertebrates.

Subsurface debris, including chunks of concrete and asphalt, and sections of pipe, should be removed from the basin where possible, as these would interfere with ecological functions of the mudflat.

6.2.1.2 Establish the primacy of habitat values over recreation as part of restoration

Removing non-native landscaping and increasing passive recreation potential along the margins of Oxford Basin are worthwhile improvements, but the existing dense vegetation and fencing currently provide considerable security for the herons and egrets that use the basin's existing habitats in large numbers. Improving public access to the basin and replacing the tall myoporum with low-growing scrub will be of little or no practical value (for wildlife or the public) if increased human activity causes the herons, egrets, and other wildlife species to stay away from Oxford Basin. Therefore, the basin must be managed carefully for its wildlife habitat values, along with providing for flood protection and water quality improvement. Levels of passive recreation and other non-essential human uses should not conflict with these main purposes.

It should be noted that from the 1970s through the 1990s, Oxford Basin served as a "dumping ground" for unwanted pets, mainly ducks, chickens, and domestic rabbits (often exchanged at Easter). These animals were thrown over the fence, which was lower at the time, creating a public nuisance and degrading the area's ecology (Schreiber and Dock 1980). With plans for new fencing and increased public access to the basin, care must be given to ensure that the old pattern does not recur, perhaps by the creation and support of a local stewardship organization (including a volunteer ranger/docent program) and clear, vandal-resistant (and easily-replaced/repaired) signage.

Any new development at Oxford Basin should be evaluated for its role in promoting natural wildlife habitat, vs. degrading or hindering this habitat. As the site is restored and public access improves, the County may receive proposals from groups to make various uses of the area (e.g., filming, special events, trash clean-up). The County should establish a mechanism for handling such requests, or should include appropriate provisions in a contract with an outside resource management group or a local Audubon chapter.

Following restoration, care should be taken to communicate effectively with all relevant users and managers that Oxford Basin, although first and foremost a flood-control facility, can be managed simultaneously as a habitat for native plants and wildlife without affecting flood-control capabilities. Therefore, activities like dumping compost or construction material, planting inappropriate vegetation, and feeding wildlife or domesticated birds, should not be tolerated.

6.2.1.3 Management considerations for upper slopes

Non-native vegetation should be removed from all parts of Oxford Basin on a regular, continuing basis under the supervision of a qualified professional, except where demonstrated to be critical to fulfilling an important natural process (e.g., retention of a small number of eucalyptus, ficus, or other non-native trees with regularly-nesting herons/egrets), consistent with the operation and maintenance requirements of the LACFCD. However, no new non-native vegetation, or even "California native" (but not locally-native) vegetation inappropriate for the Ballona Wetlands, should be introduced.

The establishment of appropriate native landscaping will probably require a complete removal of all existing ground cover and weeds, and could also require eradication of the weed seedbank (e.g., through "solarization" or appropriate means).[14]

All vegetation above the high-tide line to be preserved, promoted, and restored/re-created should consist only of the two habitat types native to the historical Ballona Wetlands area (from Cooper 2008): 1) coastal scrub (a low-profile, summer-deciduous community dominated by such species as California sagebrush *Artemisia californica*, California sunflower *Encelia californica*, and coast goldenbush *Isocoma menziesii*), and 2) willow scrub (a low thicket-like community dominated by narrow-leaved willow *Salix exigua*). A professional firm, or firms, specializing in southern California native plant restoration, installation, and maintenance is recommended to prepare the site for planting, and to achieve successful establishment of these native communities.

Unnecessary and derelict concrete structures currently on the site (such as old wildlife watering troughs) and redundant fencing should be removed from the upper slopes where feasible.

---

[14] The term *solarization* refers to sterilization of soil by covering it with plastic sheeting for roughly six weeks during warm weather. The sun's radiation is converted to heat by absorption, heating the material above 60ºC, hot enough to kill seeds and pathogens in the soil.

Telephone lines that currently cut across the northern part of Oxford Basin may be re-routed along Washington Boulevard or Admiralty Way, as they could conflict with future wildlife use of the site (and lead to collisions with flying birds, including the listed California Brown Pelican, especially on foggy days).

6.2.2 CONSERVATION POLICIES FOR WETLAND PARK AT PARCEL 9

A conceptual restoration plan has been prepared for this site in conjunction with a hotel project that is proposed for the northern (non-wetland) portion of Parcel 9 (Glenn Lukos Associates 2006b). The following policies are generally consistent with the conceptual restoration plan (hereafter the "GLA Plan") but with some recommended modifications.

6.2.2.1 Restore saltmarsh habitat with tidal influence

Tidally influenced "restored coastal salt marsh" habitat should be restored and enhanced at the Wetland Park, as outlined in the GLA Plan. Once the final contours of the development are established, habitat should be established that includes areas of emergent native marsh vegetation, exposed even during high tide, to serve as refugia for animals, and areas of exposed mud ("mudflats") at low tide, to serve as foraging areas for migratory and resident birds. The potential area of mudflats may be limited by engineering constraints.

Debris, including a concrete slab that was installed as part of the abandoned hotel project, should be removed, as these would interfere with ecological functions of the Wetland Park.

6.2.2.2 Establish the primacy of habitat values over recreation as part of restoration

The conceptual design depicted on Page 26 of the GLA Plan devotes a large proportion of the proposed habitat area to picnic tables, meeting areas, and a meandering path encircling the wetland area. Apart from the lost habitat acreage, the trail and hardscape areas would require ongoing maintenance, which typically entails the use of power equipment (including gas-powered blowers) and vehicles with back-up chimes and other disturbances, thus introducing substantial levels of noise and other disturbance on a regular basis. The Wetland Park, as envisioned, will be a very small area (less than 1.5 acre) effectively surrounded by development. To provide habitat useful to wildlife other than the most human-tolerant species, this area must be designed and managed primarily for its wildlife habitat values. Passive recreation and other human uses at the Wetland Park, for which there are several other sites in the Marina del Rey complex, including Burton Chace Park and Marina Beach, should follow from this main purpose. For these reasons, we recommend a truncated trail system and a smaller area, if any, devoted to hardscape than is called for in the GLA Plan.

Maintenance and management activities should be compatible with managing the site as a native wildlife sanctuary. The routine use of power equipment (e.g., trimmers and electric blowers), dumping of compost, or feeding of wildlife or domesticated birds, cannot be tolerated.

6.2.2.3 Management considerations for upper slopes

Non-native vegetation should be professionally removed from all parts of the Wetland Park on a regular, continuing basis. No non-native vegetation, or "California native" (but not locally-native) vegetation inappropriate for the Ballona Wetlands, should be introduced.

All vegetation above the high-tide line should consist of two habitat types: 1) coastal scrub (a low-profile, summer-deciduous community dominated by such species as California sagebrush (*Artemisia californica*), California sunflower (*Encelia californica*), and coast goldenbush (*Isocoma menziesii*), and 2) willow scrub (a low thicket-like community dominated by narrow-leaved willow *Salix exigua* that already exists at the Wetland Park site). Large shrubs, such as big saltbush (*Atriplex lentiformis*) and coyote brush (*Baccharis pilularis*) should be avoided due to the small size of the site; however, screening of the park site from adjacent roads and developed areas, as desired, could be accomplished using limited amounts of coyote brush and narrowleaf willow. Plant species from GLA's "coastal sage scrub and coastal bluff scrub" and "coastal prairie" community would be appropriate for incorporating into the coastal scrub plantings, but GLA's "maritime chaparral" community includes several plant species not native to the Marina del Rey/Ballona area, and therefore would not be appropriate for inclusion in the restoration plan[15]. A professional firm, or firms, specializing in southern California native plant restoration, installation, and maintenance should be retained to prepare the site for planting, and to achieve successful establishment of these native communities.

6.2.3 CONSERVATION POLICY FOR MARGIN OF BALLONA WETLANDS (AREA A)

6.2.3.1 Phase out non-native trees along southeastern shoulder of Fiji Way

The eastern shoulder of Fiji Way should be managed to promote the natural, open-country features along the northern margin of Ballona Wetlands Area A, especially as the Ballona Wetlands are restored to a more natural condition, as is proposed. In particular, non-native trees and shrubs along the shoulder of Fiji Way adjacent to Area A, including oleander (*Nerium oleander*), juniper (*Juniperus* sp.), and eucalyptus should be carefully removed, in a manner that ensures no significant negative impacts to nesting or roosting colonial waterbirds.

---

[15] Maritime chaparral is restricted in southern California to coastal San Diego County and limited parts of southern Orange County, and would not have occurred in the Marina del Rey/Ballona area.

6.2.3.2 Coordinate maintenance practices with CDFG Managers

County maintenance crews should work with CDFG managers at the Ballona Wetlands Ecological Reserve to ensure the success of future ecological restoration actions in Area A and elsewhere in the Ballona Wetlands. For example, County staff should be made aware that landscaping and maintenance practices along Fiji Way, such as garbage storage (which attracts non-native predators, including rats [*Rattus* spp.] that prey on bird eggs), tree-trimming during the nesting season, and rodent abatement using poison, would conflict with ecological restoration and/or wildlife management goals for the Ballona Wetlands.

7.0 LITERATURE CITED

Butler, R. W. 1992. Great Blue Heron (*Ardea herodias*). The Birds of North America Online (A. Poole, ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/025.

California Department of Fish and Game, Natural Diversity Data Base. 2009a. Search report dated 9 July 2009 for the Venice, Beverly Hills, Hollywood, Inglewood, Torrance, and Redondo Beach USGS quadrangles.

California Department of Fish and Game, Natural Diversity Data Base. 2009b. Special Animals. List dated July 2009.

California Department of Fish and Game, Natural Diversity Data Base. 2010. Special Vascular Plants, Bryophytes, and Lichens List. List dated January 2010.

Carney, K. M., and Sydeman, W. J. 1999. *A review of human disturbance effects on nesting colonial waterbirds.* Waterbirds 22:68–79.

Chambers Group. 2008. *Results of the Baseline Breeding Bird Nesting Survey and Noise Assessment for the Los Angeles County Department of Public Works Oxford Basin Low Flow Diversion Project Site in the City of Marina del Rey, Los Angeles County, California.* Letter report dated 29 July 2008 from Kris Alberts to Reyna Soriano, Los Angeles County Department of Public Works.

Collins, C. T. 1970. *The Black-crowned Night-heron as a predator of tern chicks*. Auk 87:584–586.

Cooper, D. S. 2005. *A duck club in L.A.? The near-death and slow recovery of the Ballona Wetlands.* California Waterfowl. June/July 2005.

Cooper, D. S. 2006. *Annotated checklist of extirpated, reestablished, and newly-colonized avian taxa of the Ballona Valley, Los Angeles County, California.* Bulletin of the Southern California Academy of Sciences 105:91–112.

Cooper, D. S. 2008. *The use of historical data in the restoration of the avifauna of the Ballona Wetlands, Los Angeles County, California.* Natural Areas Journal 28:83–90.

Corey, K. A. 1992. Bird survey of Ballona wetland, Playa del Rey, CA 1990–1991. Unpubl. report (30 April).

County of Los Angeles. 1976. *Draft Environmental Impact Report, Proposed Japanese-American Cultural Garden, Marina del Rey.* Department of Small Craft Harbors. Report dated 19 August 1976.

Cuthbert, F. J., Wires, L. R., and McKearnan, J. E. 2002. *Potential impacts of nesting Double-crested Cormorants on Great Blue Heron and Black-crowned Night-Herons in the U.S. Great Lakes region.* Journal of Great Lakes Research 28:145–154.

Dawson, W. L. 1915. *The breeding of the Snowy Egret in California.* Condor 17:97–98.

Dock, C. F., and Schreiber, R. W. 1981. *The Birds of Ballona*. *in* R.W. Schreiber, ed. 1981. *The Biota of the Ballona Region, Los Angeles County* (Supplement I of Marina del Rey/Ballona Local Coastal Plan). Los Angeles County Natural History Museum Foundation.

Dukesherer. D. J. 2009. Beach of the King: The Early History of Playa Del Rey, Westchester, Playa Vista, California (Volume 1). Cental Historical Group Publishing.

Francis, C. D., Ortega, C. P., and Cruz, A. 2009. Noise Pollution Changes Avian Communities and Species Interactions. Current Biology 19:1415–1419.

Froke, J. B. 2007. *Marina del Rey heronry report for 2005–2006*. Report dated 1 February 2007 prepared for the County of Los Angeles Dept. of Beaches & Harbors and Lyon Capital Management, Newport Beach, CA.

Froke, J. B. 2009. *2009 Nesting Summary for MdR P-64 & P-65*. Report dated 14 September 2009.

Gillham, M. E. 1956. *The ecology of the Pembrokeshire Islands: V. Manuring by the colonial sea birds and mammals with a note on seed distribution by gulls.* The Journal of Ecology 44:428–454.

Glenn Lukos Associates. 2006a. *Biological technical report, Parcel 9u, Marina Del Rey, California.* Draft report prepared for Woodfin Suite Hotels, San Diego, CA.

Glenn Lukos Associates. 2006b. *Conceptual restoration plan for degraded artificial wetland associated with Parcel 9u, Marina del Rey, for the Woodfin Resort.* Report prepared for Woodfin Suite Hotels, San Diego, CA.

Grewell, B. J., Callaway, J. C., and Ferren, W. R., Jr. 2007. *Estuarine wetlands*. Pp. 124–154 *in* Terrestrial Vegetation of California (M. G. Barbour, T. Keeler-Wolf, and A. A. Schoenherr, eds.). University of California Press, Berkeley.

Grinnell. J. 1898. *Birds of the Pacific slope of Los Angeles County*. Pasadena Academy of Sciences No. 2.

Grinnell, J., and Wythe, M. 1927. *Directory to the bird-life of the San Francisco Bay region.* Pacific Coast Avifauna 18.

Grinnell, J., and Miller, A. H. 1944. *The distribution of the birds of California*. Pacific Coast Avifauna 27.

Grubb, M. M. 1979. *Effects of increased noise levels on nesting herons and egrets.* Proceedings of the Colonial Waterbird Group, Vol. 2:49–54.

Gumprecht B. 1999. *The Los Angeles River: Its Life, Death, and Possible Rebirth.* Johns Hopkins University Press, Baltimore, MD.

Hall, C. S., and Kress, S. W. 2008. *Diet of nestling Black-crowned Night-herons in a mixed species colony: Implications for tern conservation.* The Wilson Journal of Ornithology 120:637–640.

Hamilton Biological, Inc. 2010. Summary report, nesting bird survey, Burton Chace Park, Marina del Rey. Letter report dated 23 June 2010, prepared for Mackone Development, Inc.

Hess D. C., Lu, W., Rabinowitz, J. D., and Botstein, D. 2006. *Ammonium toxicity and potassium limitation in yeast.* PLoS Biology 4(11).

Harkinezhad, T., Geens, T., and Vanrompay, D. 2009. Chlamydophila psittaci *infections in birds: A review with emphasis on zoonotic consequences*. Veterinary Microbiology 135:68–77.

Keane Biological Consulting. 2007. *Terrestrial biological survey report and impact analysis, Fisherman's Village Dock and Marina Project, Marina Del Rey, Los Angeles, California. February 27th, 2007 Field Survey.* Revised report dated 19 July 2007 prepared for Coastal Resources Management, Inc.

Los Angeles Audubon Society. 2009. *Guide to Bird-friendly Tree and Shrub Trimming and Removal*. Booklet published online at http://losangelesaudubon.org/images/stories/pdf/ttg-english_2010-2-08_delange-rev.pdf.

Marschalek, D. A. 2008. *California Least Tern breeding survey, 2007 season.* California Department of Fish and Game, Wildlife Branch, Nongame Wildlife Program Report, 2008-01. Sacramento, CA. 24 pp. + app.

Marschalek, D. A. 2009. *California Least Tern breeding survey, 2008 season.* California Department of Fish and Game, Wildlife Branch, Nongame Wildlife Program Report, 2009-02. Sacramento, CA. 23 pp. + app.

Marschalek, D. A. 2010. *California Least Tern breeding survey, 2009 season.* California Department of Fish and Game, Wildlife Branch, Nongame Wildlife Program Report, 2009-02. Sacramento, CA. 25 pp. + app.

Meier, T. I. 1981. *Artificial nesting structures for the Double-crested Cormorant.* Technical bulletin. No. 126. Wisconsin Department of Natural Resources, Madison, WI. 12 pp. http://digital.library.wisc.edu/1711.dl/EcoNatRes.DNRBull126.

Naylor, B., and Watt, B. 2004. *Review of the forest management guidelines for Bald Eagles, Ospreys, and Great Blue Herons in Ontario.* Draft report dated 31 July prepared by the Ontario Ministry of Natural Resources, Northeast and Southern Science and Information Sections, North Bay, Ontario, Canada.

Nisbet, I. C T. 2000. *Disturbance, habituation, and management of waterbird colonies.* Waterbirds 23:312–332.

Parnell, J. F., Ainley, D. G., Blokpoel, H., Cain, B., Custer, T. W., Dusi, J. L., Kress, S., Kushlan, J. A., Southern, W. E., Stenzel, L. E., Thompson, B. C. 1988. *Colonial waterbird management in North America.* Colonial Waterbirds 11:129–169.

Pickart, A. J., and Barbour, M. G. 2007. *Beach and dune*. Pp. 155–179 *in* Terrestrial Vegetation of California (M. G. Barbour, T. Keeler-Wolf, and A. A. Schoenherr, eds.). University of California Press, Berkeley.

Rodgers, J. A., Jr., and Smith, H. T. 1995. *Set-back distances to protect nesting bird colonies from human disturbance.* Conservation Biology 9:89–99.

Salisbury, F. B., and Ross, C. 1969. *Plant physiology*. Wadsworth, Belmont.

Schreiber, R. W., and Dock, C. F. 1980. *The birds of the bird conservation area, Marina del Rey, Los Angeles County*. Report to Department of Small Craft Harbors, County of Los Angeles, Marina del Rey, CA.

Skagen, S. K., Melcher, C. P., and Muths. E. 2001. *The interplay of habitat change, human disturbance and species interactions in a waterbird colony.* American Midland Naturalist 145:18–28.

Traut, A. H., and Hostetler, M. E. 2003. *Urban lakes and waterbirds: Effects of development on avian behavior.* Waterbirds 26:290–302.

Unitt, P. 2004. *San Diego* County *bird atlas*. Proceedings of the San Diego Society of Natural History No. 39.

U.S. Fish and Wildlife Service. 2007. Seal Beach National Wildlife Refuge Comprehensive Conservation Plan, Comments from the Wildlife and Habitat Management Review held June 26, 2007. Four-page report published online: http://www.fws.gov/sandiegorefuges/new/ccp3/pdf/WHMR%20Summary.pdf.

Vennesland, R. G. 2000. The effects of disturbance from humans and predators on the breeding decisions and productivity of the Great Blue Heron in south-coastal British Columbia. M.S. Thesis dated December 2000, Department of Biological Sciences, Simon Fraser University.

Vennesland, R. G., and Butler, R. W. 2004. *Factors influencing Great Blue Heron nesting productivity on the Pacific coast of Canada from 1998 to 1999.* Waterbirds 27:289–296.

von Bloeker, J. C. 1943. *The fauna and flora of the El Segundo sand dunes: Birds of El Segundo and Playa del Rey.* Bulletin of the Southern California Academy of Sciences 42:1–30 (Part 1) and 90–103 (Part 2).

Vos, D. K., Ryder, R. A., and Graul, W. D. 1985. *Response of breeding Great Blue Herons to human disturbance in northcentral Colorado.* Colonial Waterbirds 8:13–22.

Weseloh, D. V., and Brown, R. T. 1971. *Plant distribution within a heron rookery.* American Midland Naturalist 86: 57–64.

Wiese, J. H. 1978. *Heron nest-site selection and its ecological effects.* Pp. 27–34 *in* Wading Birds (A. Sprunt IV, J. C. Ogden, and S. Winckler, eds.). National Audubon Society Research Report 7, New York, NY.

Willett, G. 1912. *Birds of the Pacific slope of southern California.* Pacific Coast Avifauna 7.

Willett, G. 1933. *A revised list of the birds of southwestern California.* Pacific Coast Avifauna 21.

Wolford, J. W. and Boag D. A. 1971. *Food habits of Black-crowned Night Herons in southern Alberta.* Auk 88:435–437.

Appendix A: Curricula Vitae

Robert A. Hamilton

President, Hamilton Biological, Inc.

Expertise

Endangered Species Surveys
General Biological Surveys
CEQA Analysis
Population Monitoring
Bird Banding
Vegetation Mapping
Noise Monitoring
Open Space Planning
Natural Lands Management

Education

1988. Bachelor of Science degree in Biological Sciences, University of California, Irvine

Professional Experience

1994 to Present. Independent Biological Consultant, Hamilton Biological, Inc.

1988 to 1994. Biologist, LSA Associates, Inc.

Permits

Federal Permit No. TE-799557 to survey for the Coastal California Gnatcatcher and Southwestern Willow Flycatcher (expires 3/5/12)

Federal Bird Banding Subpermit No. 20431 (expires 1/31/11)

MOUs with the California Dept. of Fish and Game to survey for the San Diego Cactus Wren (expires 12/31/11), and the Coastal California Gnatcatcher and SW Willow Flycatcher (expires 5/31/12)

California Scientific Collecting Permit No. SC-001107 (expires 11/5/11)

Robert A. Hamilton has been providing biological consulting services in southern California since 1988. He spent the formative years of his career at the firm of LSA Associates in Irvine, where he was a staff biologist and project manager. He has worked as a full-time independent consultant since 1994, incorporating the enterprise as Hamilton Biological, Inc., in 2009. His consultancy specializes in the practical application of environmental policies and regulations to land management and land use decisions in southern California.

A recognized authority on the status, distribution, and identification of birds in California, Mr. Hamilton is the lead author of two standard references describing aspects of the state's avifauna: *The Birds of Orange County: Status & Distribution* and *Rare Birds of California*. Mr. Hamilton has also conducted extensive studies in Baja California, and for seven years edited the Baja California Peninsula regional reports for the journal *North American Birds*. He served ten years on the editorial board of *Western Birds* and regularly publishes in peer-reviewed journals. He is a founding member of the Coastal Cactus Wren Working Group and is presently updating the Cactus Wren species account for *The Birds of North America Online*. Mr. Hamilton's expertise includes floral identification and vegetation mapping. He served for a decade as Conservation Chair for the Orange County chapter of the California Native Plant Society and has a working knowledge of native plant restoration.

Mr. Hamilton conducts general and focused biological surveys of small and large properties as necessary to obtain various local, state, and federal permits, agreements, and clearances. He also conducts landscape-level surveys needed by land managers to monitor songbird populations. Mr. Hamilton holds the federal and state permits and MOUs listed to the left, and he is recognized by federal and state resource agencies as being highly qualified to survey for the Least Bell's Vireo. He also provides nest-monitoring services in compliance with the federal Migratory Bird Treaty Act and California Fish & Game Code Sections 3503, 3503.5 and 3513. Mr. Hamilton has the capability of monitoring noise as it relates to nesting or roosting birds using an advanced Quest SoundPro unit that can provide second-by-

Board Memberships, Advisory Positions, Etc.

Coastal Cactus Wren Working Group (2008–present)

American Birding Association: Baja Calif. Peninsula Regional Editor, *North American Birds* (2000–2006)

Western Field Ornithologists: Associate Editor of *Western Birds* (1999–2008)

California Bird Records Committee (1998–2001)

Nature Reserve of Orange County: Technical Advisory Committee (1996–2001)

California Native Plant Society, Orange County Chapter: Conservation Chair (1992–2003)

Professional Affiliations

American Ornithologists' Union

Cooper Ornithological Society

Institute for Bird Populations

California Native Plant Society

Southern California Academy of Sciences

Western Foundation of Vertebrate Zoology

Insurance

$2,000,000 general liability and professional liability policies (The Hartford)

$1,000,000 auto liability policy (State Farm)

second logging of noise levels at the nest; this allows documentation of the varying sound pressure levels that nesting birds are exposed to during construction and evaluation of any effects associated with different levels. He is also an expert photographer, and typically provides photo-documentation and/or video documentation as part of his services.

Drawing upon a robust, multidisciplinary understanding of the natural history and ecology of his home region, Mr. Hamilton works with private and public land owners, as well as governmental agencies and interested third parties, to apply the local, state, and federal land use policies and regulations applicable to each particular situation. Mr. Hamilton has amassed extensive experience in the preparation and critical review of CEQA documents, from relatively simple Negative Declarations to complex supplemental and recirculated Environmental Impact Reports. In addition to his knowledge of CEQA and its Guidelines, Mr. Hamilton understands how each Lead Agency brings its own interpretive variations to the CEQA review process.

Representative Project Experience

From 2007 to present, have reviewed biological resources sections of CEQA documents submitted to the County of Los Angeles Department of Regional Planning. Work includes evaluating the accuracy and adequacy of consultants' biological reports, developing impact analyses and mitigation measures, and recommending findings of significance. Under the same contract, prepared a list of drought-tolerant native plants, hyperlinked to web-based information, for use in landscaping in Los Angeles County. The County later revised the list, with some loss of information, but the original list and accompanying map of seven planting zones in the county are available here and here.

In 2009, under contract to the Palos Verdes Peninsula Land Conservancy, surveyed for the California Gnatcatcher and Cactus Wren across nine habitat reserves that constitute nearly all of the Portuguese Bend Natural Preserve in coastal Los Angeles County. The services provided included mapping and classifying all cactus scrub resources in the areas surveyed.

Under contract to the Conservation Biology Institute in San Diego County, conducted 2008 reconnaissance of those portions of the San Dieguito River Valley that were unburned or onl burned during the massive Witch Fire, which consumed nearly 200,000 acres in October 2007. Three-pass surveys conducted at 14 sites between Lake Hodges and the San Pasqual Valley determined the presence or absence of Cactus Wrens and California Gnatcatchers. Work products included maps of all unburned and partially burned scrub communities, maps of weed infestations, and complete lists documenting the numbers of each vertebrate wildlife species detected during the surveys.

Under contract to the City of Orange, prepared the Biological Resources section of a hybrid Supplemental EIR/Draft EIR for the 6,900-acre Santiago Hills II/East Orange Planned Community project in central Orange County. This complicated document covered one proposed development area that already had CEQA clearance, but that required updating for alterations to the previously approved plan, and a much larger area that was covered under an existing Natural Communities Conservation Plan (NCCP). The SEIR/EIR was certified in November 2005.

During the 1990s and 2000s, worked with study-design specialists and resource agency representatives to develop the long-term passerine bird monitoring program for the 37,000-acre Nature Reserve of Orange County, and directed its implementation from 1996 to 2001 with additional contract work since then. Tasks have included 1) annual monitoring of 40 California Gnatcatcher and Cactus Wren study sites, 2) oversight of up to 10 constant-effort bird banding stations from 1998 to 2003 under the Monitoring Avian Productivity and Survivorship (MAPS) program, and 3) focused surveys for the Cactus Wren, and detailed mapping of cactus scrub habitat, across the NROC's coastal reserve in 2006 and 2007.

Third-Party CEQA Review

Under contract to cities, conservation groups, homeowners' associations, and other interested parties, have reviewed EIRs and other project documentation for the following projects:

- The Ranch Plan (residential/commercial, County of Orange)
- Southern Orange County Transportation Infrastructure Improvement Project (Foothill South Toll Road, County of

Other Relevant Experience

Field Ornithologist, San Diego Natural History Museum Scientific Collecting Expedition to Central and Southern Baja California, October/November 1997 and November 2003.

Field Ornithologist, Island Conservation and Ecology Group Expedition to the Tres Marías Islands, Nayarit, Mexico, 23 January to 8 February 2002.

Field Ornithologist, Algalita Marine Research Foundation neustonic plastic research voyages in the Pacific Ocean, 15 August to 4 September 1999 and 14 to 28 July 2000.

Field Assistant, Bird Banding Study, Río Ñambí Reserve, Colombia, January to March 1997.

References

Provided upon request.

- Sunset Ridge Park (proposed city park, City of Newport Beach)
- Gregory Canyon Landfill Restoration Plan (proposed mitigation, County of San Diego)
- Montebello Hills Specific Plan EIR (residential, City of Montebello)
- Cabrillo Mobile Home Park Violations (illegal wetland filling, City of Huntington Beach)
- Newport Hyatt Regency (timeshare conversion project, City of Newport Beach)
- Lower San Diego Creek "Emergency Repair Project" (flood control, County of Orange)
- Tonner Hills (residential, City of Brea)
- The Bridges at Santa Fe Units 6 and 7 (residential, County of San Diego)
- Villages of La Costa Master Plan (residential/commercial, City of Carlsbad)
- Whispering Hills (residential, City of San Juan Capistrano)
- Santiago Hills II (residential/commercial, City of Orange)
- Rancho Potrero Leadership Academy (youth detention facility/road, County of Orange)
- Saddle Creek/Saddle Crest (residential, County of Orange)
- Frank G. Bonelli Regional County Park Master Plan (County of Los Angeles)

Contact Information

Robert A. Hamilton
President, Hamilton Biological, Inc.
316 Monrovia Avenue
Long Beach, CA 90803
562-477-2181
562-433-5292 fax
robb@hamiltonbiological.com
http://hamiltonbiological.com

Selected Presentations

Hamilton, R. A., and Cooper, D. S. 2009-2010. Conservation & Management Plan for Marina del Rey. Twenty-minute Powerpoint presentation given to different governmental agencies and interest groups.

Hamilton, R. A. 2008. Cactus Wren Conservation Issues, Nature Reserve of Orange County. One-hour Powerpoint presentation for Sea & Sage Audubon Society, Irvine, California, 25 November 2008.

Hamilton, R. A., Miller, W. B., Mitrovich, M. J. 2008. Cactus Wren Study, Nature Reserve of Orange County. Twenty-minute Powerpoint presentation given at the Nature Reserve of Orange County's Cactus Wren Symposium, Irvine, California, 30 April 2008.

Hamilton, R. A. and K. Messer. 1999-2004 Results of Annual California Gnatcatcher and Cactus Wren Monitoring in the Nature Reserve of Orange County. Twenty-minute Powerpoint presentation given at the Partners In Flight meeting: Conservation and Management of Coastal Scrub and Chaparral Birds and Habitats, Starr Ranch Audubon Sanctuary, 21 August 2004; and at the Nature Reserve of Orange County 10th Anniversary Symposium, Irvine, California, 21 November 2006.

Hamilton, R.A. Preliminary results of reserve-wide monitoring of California Gnatcatchers in the Nature Reserve of Orange County. Twenty-minute Powerpoint presentation given at the Southern California Academy of Sciences annual meeting at California State University, Los Angeles, 5 May 2001.

Publications

Hamilton, R. A. 2008. Cactus Wrens in central & coastal Orange County: How will a worst-case scenario play out under the NCCP? *Western Tanager* 75:2–7.

Erickson, R. A., R. A. Hamilton, R. Carmona, G. Ruiz-Campos, and Z. A. Henderson. 2008. Value of perennial archiving of data received through the North American Birds regional reporting system: Examples from the Baja California Peninsula. *North American Birds* 62:2–9.

Erickson, R. A., R. A. Hamilton, and S. G. Mlodinow. 2008. Status review of Belding's Yellowthroat *Geothlypis beldingi*, and implications for its conservation. Bird Conservation International 18:219–228.

Hamilton, R. A. 2008. Fulvous Whistling-Duck (*Dendrocygna bicolor*). Pp. 68-73 *in* Shuford, W. D. and T. Gardali, eds. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate

conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, CA, and California Department of Fish and Game, Sacramento, CA.

California Bird Records Committee (R. A. Hamilton, M. A. Patten, and R. A. Erickson, editors.). 2007. Rare Birds of California. Western Field Ornithologists, Camarillo, CA.

Hamilton, R. A., R. A. Erickson, E. Palacios, and R. Carmona. 2001–2007. *North American Birds* quarterly reports for the Baja California Peninsula Region, Fall 2000 through Winter 2006/2007.

Hamilton, R. A. and P. A. Gaede. 2005. Pink-sided × Gray-headed Juncos. *Western Birds* 36:150–152.

Mlodinow, S. G. and R. A. Hamilton. 2005. Vagrancy of Painted Bunting (*Passerina ciris*) in the United States, Canada, and Bermuda. *North American Birds* 59:172–183.

Erickson, R. A., R. A. Hamilton, S. González-Guzmán, G. Ruiz-Campos. 2002. Primeros registros de anidación del Pato Friso (*Anas strepera*) en México. Anales del Instituto de Biología, Universidad Nacional Autónoma de México, Serie Zoología 73(1): 67–71.

Hamilton, R. A. and J. L. Dunn. 2002. Red-naped and Red-breasted sapsuckers. *Western Birds* 33:128–130.

Hamilton, R. A. and S. N. G. Howell. 2002. Gnatcatcher sympatry near San Felipe, Baja California, with notes on other species. *Western Birds* 33:123–124.

Hamilton, R. A. 2001. Book review: The Sibley Guide to Birds. *Western Birds* 32:95–96.

Hamilton, R. A. and R. A. Erickson. 2001. Noteworthy breeding bird records from the Vizcaíno Desert, Baja California Peninsula. Pp. 102-105 *in* Monographs in Field Ornithology No. 3. American Birding Association, Colorado Springs, CO.

Hamilton, R. A. 2001. Log of bird record documentation from the Baja California Peninsula archived at the San Diego Natural History Museum. Pp. 242–253 *in* Monographs in Field Ornithology No. 3. American Birding Association, Colorado Springs, CO.

Hamilton, R. A. 2001. Records of caged birds in Baja California. Pp. 254–257 *in* Monographs in Field Ornithology No. 3. American Birding Association, Colorado Springs, CO.

Erickson, R. A., R. A. Hamilton, and S. N. G. Howell. 2001. New information on migrant birds in northern and central portions of the Baja California Peninsula, including species new to Mexico. Pp. 112–170 *in* Monographs in Field Ornithology No. 3. American Birding Association, Colorado Springs, CO.

Howell, S. N. G., R. A. Erickson, R. A. Hamilton, and M. A. Patten. 2001. An annotated checklist of the birds of Baja California and Baja California Sur. Pp. 171–203 *in* Monographs in Field Ornithology No. 3. American Birding Association, Colorado Springs, CO.

Ruiz-Campos, G., González-Guzmán, S., Erickson, R. A., and Hamilton, R. A. 2001. Notable bird specimen records from the Baja California Peninsula. Pp. 238–241 *in* Monographs in Field Ornithology No. 3. American Birding Associati

Wurster, T. E., R. A. Erickson, R. A. Hamilton, and S. N. G. Howell. 2001. Database of selected observations: an augment to new information on migrant birds in northern and central portions of the Baja California Peninsula. Pp. 204–237 *in* Monographs in Field Ornithology No. 3. American Birding Association, Colorado Springs, CO.

Erickson, R. A. and R. A. Hamilton, 2001. Report of the California Bird Records Committee: 1998 records. *Western Birds* 32:13–49.

Hamilton, R. A., J. E. Pike, T. E. Wurster, and K. Radamaker. 2000. First record of an Olive-backed Pipit in Mexico. *Western Birds* 31:117–119.

Hamilton, R. A. and N. J. Schmitt. 2000. Identification of Taiga and Black Merlins. *Western Birds* 31:65–67.

Hamilton, R. A. 1998. Book review: Atlas of Breeding Birds, Orange County, California. *Western Birds* 29:129–130.

Hamilton, R. A. and D. R. Willick. 1996. The Birds of Orange County, California: Status and Distribution. Sea & Sage Press, Sea & Sage Audubon Society, Irvine.

Hamilton, R. A. 1996–98. Photo Quizzes. *Birding* 27(4):298-301, 28(1):46-50, 28(4):309-313, 29(1): 59-64, 30(1):55–59.

Erickson, R. A., and Hamilton, R. A. 1995. Geographic distribution: *Lampropeltis getula californiae* (California Kingsnake) in Baja California Sur. Herpetological Review 26(4):210.

Bontrager, D. R., R. A. Erickson, and R. A. Hamilton. 1995. Impacts of the October 1993 Laguna fire on California Gnatcatchers and Cactus Wrens. *in* J. E. Keeley and T. A. Scott (editors). Wildfires in California Brushlands: Ecology and Resource Management. International Association of Wildland Fire, Fairfield, Washington.

Erickson, R. A., R. A. Hamilton, S. N. G. Howell, M. A. Patten, and P. Pyle. 1995. First record of Marbled Murrelet and third record of Ancient Murrelet for Mexico. *Western Birds* 26: 39–45.

Erickson, R. A., and R. A. Hamilton. 1993. Additional summer bird records for southern Mexico. *Euphonia* 2(4): 81–91.

Erickson, R. A., A. D. Barron, and R. A. Hamilton. 1992. A recent Black Rail record for Baja California. *Euphonia*

Daniel S. Cooper

President, Cooper Ecological Monitoring, Inc.

Areas of Expertise

- Project Management
- Environmental Compliance (CEQA/NEPA) and Monitoring
- Bird and Wildlife Surveys
- Biological Assessments
- Protocol Surveys for the California Gnatcatcher and other special-status bird species

Years of Experience

CEM, Inc.: 4 years
Audubon California: 5 years

Education

MSc. (Biogeography)/1999/UC Riverside
BA/1995/Harvard University

Certification

U.S. Fish and Wildlife Permit No. TE-100008-0 (California Gnatcatcher).
USGS Master Station Banding Permit (#23049) (2001-2004)
CDFG Scientific Collecting Permit (in review)

Overview

Daniel S. Cooper is an authority on California bird ecology, identification and distribution, and has a strong background in southern California ecology and natural history. Specific areas of expertise include the Ballona Wetlands, eastern Santa Monica Mountains, Santa Clara River, Puente-Chino Hills, and remnant habitat patches on the floor of the Los Angeles Basin. Mr. Cooper has designed and managed numerous field-based research projects and assessments for a wide variety of clients, including public agencies and municipalities, large consulting firms, private landowners, and nonprofit environmental organizations. He is the author of Important Bird Areas of California (Audubon California 2004), and he continues to publish in peer-reviewed journals.

Mr. Cooper is permitted by the U.S. Fish and Wildlife Service to perform protocol surveys for the federally-threatened California gnatcatcher, and brings more than ten years of professional experience surveying for and observing special-status species throughout California. Mr. Cooper has held a Master Station Bird Banding permit from the U.S. Geological Survey, and has completed the requirements for a scientific collecting permit for the California Dept. of Fish and Game (anticipated summer 2009). Since the mid-1990s, Mr. Cooper has also conducted original research on bird distribution in Central and northern South America, primarily for private landowners.

Project Management Experience

Griffith Park Natural History Survey and Postfire Bio-monitoring. Researched and co-authored Griffith Park Wildlife Management Plan. Supervised development of website (www.griffithparkwildlife.org; with Cartifact, Inc.). Designed and carried out first-ever study of wildlife of Griffith Park, focusing on the 2007 burn area, including breeding/wintering birds, reptiles/amphibians, and bats with two subcontractors. Coordinated survey effort of reptiles/amphibians with USGS San Diego Field Station (Dr. Robert Fisher). Wildlife Management Plan submitted to City of Los Angeles, Dept. of Recreation and Parks on January 22, 2009; other technical reports submitted include those on bats (February 20, 2009) and birds (March 2, 2009).

Coastal Cactus Wren Survey, Los Angeles County. Organized and supervise a team of more than 20 volunteers for The Nature Conservancy (ongoing), the first-ever effort to document the actual range of this bird in the County.

Puente Hills Landfill Native Habitat Preservation Authority, Whittier, CA. As the staff ecologist, I managed $2M of restoration contracts in coastal sage scrub, oak/walnut woodland, and riparian habitats in western Puente Hills. I also developed and reviewed plant palettes and restoration design, and oversaw bio-monitoring of restoration sites (2007-08).

Audubon Christmas Bird Count. Organizer and compiler for two Los Angeles-area Christmas Counts: Los Angeles (since 2008) and Santa Clarita (since 2003). These are annual events that involve coordinating assignments and processing data sheets for 50+ volunteers, part of a worldwide effort to census birds each winter.

CoffeeReserve Program. Developed in 2006 with California-based coffee importer Rogers Family Co., this program has organized bird and wildlife surveys on supplier-farms in Chiapas, Mexico and Nicaragua, developed species lists and hiking maps for several properties, and pilot-testing an ecotourism internship program at a lodge/farm complex in northern Nicaragua in 2008.

Kingston Wildlife Research Station, Kingston, RI. Managed bird-banding station for Univ. of Rhode Island; other responsibilities included training volunteers, writing grants (obtained $10,000 for habitat management), bird/amphibian surveys of local natural areas (2005-06).

California Important Bird Area Project. From 2001-2004, researched, wrote and published the Important Bird Areas of California (Audubon California 2004), a compendium of 150 sites considered most critical for bird conservation in the state. This project involved convening a team of dozens of advisors and local experts from around the state, numerous site visits, and working with photographers, a layout designer, printer, and distribution company. This book now forms a cornerstone of Audubon's conservation work in California.

CEQA/NEPA Compliance

Marina del Rey Dredging and Sand-Separation Project, Los Angeles, CA. Designed survey protocol and carried out surveys and construction monitoring for wintering population of federally-threatened western snowy plover at Dockweiler State Beach. Attend weekly construction meetings with US Army Corps of Engineering and County of Los Angeles staff and contractors (ongoing).

Vista Canyon Ranch, Santa Clarita, CA. Conducted field visits, provided consultation on special-status plant and wildlife species as part of preparation of biological assessment of large parcel along the Santa Clara River (with Forde Biological Consultants and The River Project). Attend design meetings with developer, architect and consultants (ongoing).

Landmark Village, Newhall Ranch, Santa Clarita, CA. Provided analysis of and re-wrote special-status species accounts in Biological Resources section of EIR for large residential and commercial development along Santa Clara River for Audubon California (2007) and Pacific Coast Conservation Alliance (2008).

Broad Beach, Malibu, CA. Conducted field visits and helped prepare the Biological Assessment (with Robert A. Hamilton) for Malibu Bay Company development at Broad Beach. Analyzed impacts to potential ESHA (Environmentally Sensitive Habitat Area) at site (2008).

San Gabriel River Discovery Center, South El Monte, CA. Conducted bird surveys and habitat assessment and provided mitigation recommendations for proposed nature center and office/conference facility in the Whittier Narrows Recreation Area. Final reports submitted to the Los Angeles and San Gabriel Rivers and Mountains Conservancy November 7, 2008.

Faunal/Floral Surveys (clients listed in parentheses)

Bird surveys and analysis, incl. mist-netting, point-counts, spot-mapping, and/or walking transects:

- Playa Vista Riparian Corridor, Los Angeles, CA (ongoing, for E Read Consulting, Inc.)
- Ballona Wetlands Ecological Reserve, Playa del Rey, CA (ongoing; Friends of Ballona Wetlands)
- Ballona Freshwater Marsh, Los Angeles, CA (Center for Natural Lands Management)
- Ballona Outdoor Learning and Discovery site, Playa del Rey, CA (Ballona Wetlands Foundation)
- Malibu Lagoon, Malibu, CA (Resource Conservation District of the Santa Monica Mountains)
- Nicholas Creek mouth, Malibu, CA (Wishtoyo Foundation)

Miscellaneous bird surveys:

- Kern River Preserve, Weldon, CA (incl. MAPS Station; Kern River Research Center)
- Audubon Center in Debs Park, Los Angeles (incl. MAPS Station; Audubon California)
- Western Riverside Co. (UCR/Western Riverside County Multi-Species Habitat Conservation Plan; Dartmouth College)
- Audubon Sanctuaries in Central MA (Massachusetts Audubon Society)
- Kingston Wildlife Research Station, Kingston, RI (Univ. of Rhode Island)
- Angelus Oaks Transect, San Bernardino Mountains, CA (USGS Breeding Bird Survey)
- Pasoh Forest Reserve, Malayisa (Univ. of Malaysia)
- Chequamagon National Forest, Wisconsin (Univ. of Missouri)
- Private forest reserves in Guatemala, Costa Rica, Panama and Venezuela (various owners)

Biological assessments (multi-taxa):

- Cahuenga Peak, Los Angeles, CA (ongoing; The Trust for Public Land)
- Sanford-Avalon Community Garden, Watts, CA. Conduct (ongoing; Los Angeles Community Garden Council)
- Open space parcels in Northeastern Los Angeles, CA (Mountains Recreation and Conservation Authority)
- Mission Creek, South El Monte, CA (Los Angeles Conservation Corps)
- Elephant Hill, Montecito Heights (Los Angeles), CA (Committee to Save Elephant Hill)

Experience with Special-status Species

Coastal California gnatcatcher *Polioptila californica californica*
More than 50 hours of experience conducting protocol surveys for this species in Los Angeles and Riverside counties; Discovered previously-unknown populations in western Puente Hills and northern Chino Hills (both Los Angeles Co.).
Western snowy plover *Charadrius alexandrinus nivosus*
Surveyed for and monitored this species at Dockweiler State Beach, Los Angeles; volunteer for a countywide survey in Los Angeles County (Surfrider Foundation, Pacific Coast Conservation Alliance)
Western burrowing owl *Athene cunicularia hypugaea*
Volunteered (Antelope Valley, Los Angeles Co., CA) on a statewide breeding population census for Institute for Bird Populations.
Mountain plover *Charadrius montanus*
Long-billed curlew *Numenius americanus*
Volunteered in surveys for both grassland species in agricultural fields in the Imperial Valley, CA, with researchers from the Los Angeles Co. Museum of Natural History.
Coastal cactus wren *Campylorhynchus brunneicapillus sandiegensis*
Organizing Los Angeles County portion of region-wide survey for The Nature Conservancy.
Least Bell's Vireo *Vireo bellii pusillis*
Assessed potential breeding habitat at several sites in Los Angeles and Riverside counties.
Belding's savannah sparrow *Passerculus sandwichensis beldingi*
Surveyed for this and other coastal wetland species at Ballona Freshwater Marsh and adjacent Ballona Wetlands.

Survey experience with the following additional special-status species:

BIRDS
Brant *Branta bernicla*
Cackling Canada goose *B. hutchinsii leucopareia*
Ruffed grouse *Bonasa umbellus*
California brown pelican *Pelecanus occidentalis californicus*
Double-crested cormorant *Phalacrocorax auritus*
Great egret *Ardea alba*
Great blue heron *Ardea herodias*
American bittern *Botaurus lentiginosus*
Snowy egret *Egretta thula*
Least bittern *Ixobrychus exilis*
Black-crowned night-heron *Nycticorax nycticorax*
Cooper's hawk *Accipiter cooperii*
White-tailed kite *Elanus leucurus*
Merlin *Falco columbarius*
Peregrine falcon *F. peregrinus*
Western yellow-billed cuckoo *Coccyzus americanus occidentalis*
Southwestern willow flycatcher *Empidonax traillii extimus*
Brown-crested flycatcher *Myiarchus tyrannulus*
Loggerhead shrike *Lanius ludovicianus* (incl. *mearnsi*)
Least bell's vireo *Vireo bellii pusillus*
California horned lark *Eremophila alpestris actia*
Yellow warbler *Dendroica petechia*
Yellow-breasted chat *Icteria virens*
Southern California rufous-crowned sparrow *Aimophila ruficeps canescens*

Grasshopper sparrow *Ammodramus savannarum*
Bell's sage sparrow *Amphispiza belli belli*
Black-chinned sparrow *Spizella atrogularis*
Summer tanager *Piranga rubra*
Kern red-winged blackbird *Agelaius phoeniceus aciculatus*
Tricolored blackbird *Agelaius tricolor*
Yellow-headed blackbird *Xanthocephalus xanthocephalus*

OTHER WILDLIFE
Coast horned lizard *Phrynosoma coronatum*
Orange-throated whiptail *Aspidoscelis hyperythra*
Coastal western whiptail *Aspidoscelis tigris stejnegeri*
Ringneck snake *Diadophis punctatus*
Northern red-diamond rattlesnake *Crotalus ruber ruber*
San Diego black-tailed jackrabbit *Lepus californicus bennettii*

PLANTS
Southern California black walnut *Juglans californicus*
Hubby's Phacelia *Phacelia cicutaria* var. *hubbyi*
Catalina mariposa-lily *Calochortus catalinae*
Slender mariposa-lily *Calochortus clavatus*
Plummer's mariposa-lily *Calochortus plummerae*
Humboldt lily *Lilium humboldti*

Expert Witness/Declaration

Expert witness deposition regarding the ecological function of eucalyptus trees in the Malibu/Santa Monica Mountains area, Sidley vs. Thurman (settled out-of-court Oct. 2008).

Declaration in support of plaintiffs' motion for summary judgment in NEPA case involving stream-filling, Wishtoyo Foundation/Ventura Coastkeeper et al. vs. Francis J. Harvey, Secretary of the Army et al. and Pardee Homes. U.S. District Court, Central Coast of California (Nov. 2007).

Teaching

University of California, Los Angeles. *Instructor, UCLA Extension School*: Developed courses on conservation biology and bird monitoring, 2001 - 2003.

University of California, Riverside. *Graduate Teaching Assistant*: Geomorphology, Natural Disasters, and Astronomy, 1998-1999.

Boards/Committees

Griffith Park Postfire Recovery Team. Wildlife Team Leader, 2007-2008
California Department of Water Resources. Salton Sea Restoration Advisory Committee, 2003-2005
California Partners-in-Flight. Executive Steering Committee, 2003-2005
Los Angeles and San Gabriel Rivers and Mountains Conservancy. Tech. Advisory Board, 2002- 2005
Central Valley Habitat Joint Venture. Executive Steering Committee, 2001-2003
Friends of the Los Angeles River. Technical Advisory Board, 1989-2001

Professional Societies/Affiliations

Western Field Ornithologists
Neotropical Bird Club
Southern California Academy of Sciences
Southern California Botanists

Awards

Semifinalist honor, Interactive Media. International Science & Engineering Visualization Challenge (National Science Foundation/*Science*), for the website "Griffith Park Wildlife Management Plan", online at: www.griffithparkwildlife.org 2008.

Certificate of Appreciation, "In recognition of outstanding citizenship and activities enhancing community betterment" (City of Los Angeles), for service to the Griffith Park Postfire Recovery Team, 2008.

Audubon "ACE" Award, Debs Park Audubon Center planning team (National Audubon Society), 2001.

Education Project Award - University of California, Riverside (American Planning Association, Inland Empire Section), for the website "Understanding the Plants and Animals of the Western Riverside County Multiple Species Habitat Conservation Plan", online at www.ecoregion.ucr.edu, 2001.

Winner, Great Texas Birding Classic ("Team Wildbird", sponsored by Wildbird magazine), 1999.

Chronology

1995 - 1996	Research Associate, Kern River Research Center
1997 - 1999	Graduate Research Associate, Univ. of California, Riverside
1999 - 2001	Biologist, National Audubon Society
2001 - 2005	Dir. of Bird Conservation (California), National Audubon Soc.
2005 - 2006	Manager, Kingston Wildlife Research Station
2005 -	President, Cooper Ecological Monitoring, Inc.

Contact Information

Cooper Ecological Monitoring, Inc.
5850 W. 3rd St., #167
Los Angeles, CA 90036
Cell: 323.397.3562
Email: dan@cooperecological.com
Website: www.cooperecological.com

Publications

Books

Cooper, D.S. 2004. Important Bird Areas of California. Audubon California, Pasadena. 286 pp.

Book sections

Cooper, D.S. 2007. "Playa del Rey/Ballona Freshwater Marsh", p. 336, *In*: A Birder's Guide to Southern California, Schram, B., American Birding Association, Colorado Springs, CO.

---------------- 2005. "Ernest E. Debs Regional Park & Audubon Center", pp. 16-17, *In:* Birding Guide to the Greater Pasadena Area, Pasadena Audubon Soc., Pasadena, CA.

Peer-reviewed papers

Mathewson, P., S. Spehar and D.S. Cooper. 2008. A preliminary large mammal survey of Griffith Park, Los Angeles, California. Bull. So. Calif. Acad. Sci. 107:57-67.

Cooper, D.S. 2008. The use of historical data in the restoration of the avifauna of the Ballona Wetlands, Los Angeles County, California. Natural Areas Journal 28:83-90.

---------------- 2006. Annotated checklist of extirpated, reestablished, and newly-colonized avian taxa of the Ballona Valley, Los Angeles County, California. Bull. So. Calif. Acad. Sci. 105:91-112.

---------------- 2006. Shorebird use of a novel habitat: the lower Los Angeles River channel. Western Birds 37:1-6.

Cooper, D.S, R. Carmona, and R.A. Erickson. 2004. State of the Region: Baja California Peninsula. North American Birds 58:605-606.

Cooper, D.S. 2003. New distributional and ecological information on birds in southwestern Guatemala. Cotinga 19:61-64.

---------------- 2002. Geographical associations of breeding bird distribution in an urban open space. Biological Conservation 104:205-210.

---------------- 2000. Breeding landbirds of a highly-threatened open space: The Puente-Chino Hills, California. Western Birds 31:213-234.

---------------- 1999. Notes on the birds of Isla Popa, western Bocas del Toro, Panama. Cotinga 11:23-26.

Cooper, D.S. and C.M. Francis. 1998. Nest predation in a lowland Malaysian rainforest. Biological Conservation 85:199-202.

Cooper, D.S. 1998. Birds of the Rio Negro Jaguar Preserve, Colonia Libertad, Costa Rica. Cotinga 8:17-22.

Rowe, S.P. and D.S. Cooper. 1997. Confirmed nesting of Lazuli Bunting with Indigo Bunting in Kern County, California. Western Birds 28:225-227.

Cooper, D.S. and D. Perlman. 1997. Conservation of biodiversity on California military bases: Implications of base closures. Fremontia 25:3-8.

Book reviews

Cooper, D.S. 2004. Review of *Birds of the Salton Sea: Status, biogeography and ecology*, by M.A. Patten, G.M. McCaskie and P. Unitt. University of California Press. Western Birds 35:114-117.

Professional reports

<u>Ballona Wetlands</u>

Cooper, D.S. 2008. Quarterly bird survey, Fall 2008. Playa Vista Riparian Corridor, Los Angeles, California. Prepared for E Read and Associates, Orange, California, Oct. 27, 2008.

---------------- 2008 Breeding bird survey, Ballona Freshwater Marsh at Playa Vista, Playa del Rey, California. Prepared for E Read and Associates, Orange, California, July 2, 2008.

---------------- 2008. 2007-08 Winter bird survey, Ballona Freshwater Marsh at Playa Vista, Playa del Rey, California. Prepared for E Read and Associates, Orange, California, Jan. 12, 2007.

---------------- 2007. 2007 Fall bird survey, Ballona Freshwater Marsh at Playa Vista, Playa del Rey, California. Prepared for E Read and Associates, Orange, California, Oct. 8, 2007.

---------------- 2007. 2007 Breeding bird survey, Ballona Freshwater Marsh at Playa Vista, Playa del Rey, California. Prepared for the Center for Natural Lands Management, Fallbrook, California, July 13, 2007.

---------------- 2007. Chapter 6: Birds of the BOLD Project Site. In: J.H. Dorsey and S. Bergquist (Eds.), "A baseline survey of the Ballona Outdoor Learning & Discovery (BOLD) Area, Ballona Wetlands, Los Angeles County, California". Report submitted to The California Coastal Conservancy and Santa Monica Bay Restoration Commission by the Ballona Wetlands Foundation, April, 2007.

---------------- 2007. 2006-07 Winter bird survey, Ballona Freshwater Marsh at Playa Vista, Playa del Rey, California. Prepared for the Center for Natural Lands Management, Fallbrook, California, Jan. 20, 2007.

---------------- 2006. 2006 Fall bird survey, Ballona Freshwater Marsh at Playa Vista, Playa del Rey, California. Prepared for the Center for Natural Lands Management, Fallbrook, California, Oct. 23, 2006.

---------------- 2006. 2006 Breeding bird survey, Ballona Freshwater Marsh at Playa Vista, Playa del Rey, California. Prepared for the Center for Natural Lands Management, Fallbrook, California, July 14, 2006.

---------------- 2006. 2005-06 Winter bird survey. Ballona Freshwater Marsh at Playa Vista, Playa del Rey, California. Prepared for the Center for Natural Lands Management, Fallbrook, California, Jan. 7, 2006.

---------------- 2005. 2005 Fall bird survey, Ballona Freshwater Marsh at Playa Vista, Playa del Rey, California. Prepared for the Center for Natural Lands Management, Fallbrook, California, Nov. 8, 2005.

---------------- 2005. 2005 Breeding bird survey, Ballona Freshwater Marsh at Playa Vista, Playa del Rey, California. Prepared for the Center for Natural Lands Management, Fallbrook, California, July 11, 2005.

---------------- 2005. 2004-05 Winter bird survey. Ballona Freshwater Marsh at Playa Vista, Playa del Rey, California. Prepared for the Center for Natural Lands Management, Fallbrook, California, Feb. 8, 2005.

---------------- 2005. Checklist of birds of Ballona Valley, Los Angeles County, California (Online). Available: http://www.cooperecological.com/ballona_field_checklist_v.htm.

---------------- 2004. 2004 Fall bird survey, Ballona Freshwater Marsh at Playa Vista, Playa del Rey, California. Prepared for the Center for Natural Lands Management, Fallbrook, California, Nov. 2, 2004.

---------------- 2004. 2004 Breeding bird survey, Ballona Freshwater Marsh at Playa Vista, Playa del Rey, California. Prepared for the Center for Natural Lands Management, Fallbrook, California, July 25, 2004.

---------------- 2004. Ballona Wetlands Training Manual, Audubon Ballona Wetlands Program. 54 pp.

<u>Misc. Los Angeles area</u>

Cooper, D.S. 2008. Ecological assessment of open space remnants in northeastern Los Angeles. Prepared for Mountains Recreation and Conservation Authority (MRCA), Los Angeles, Calif. Nov. 15, 2008.

---------------- 2008. Summer bird survey for San Gabriel River Discovery Center. Prepared for Los Angeles and San Gabriel Rivers and Mountains Conservancy (RMC), Azusa, Calif. Nov. 7, 2008.

---------------- 2008. Habitat Assessment for Whittier Narrows Natural Area (eastern portion). Prepared for Los Angeles and San Gabriel Rivers and Mountains Conservancy (RMC), Azusa, Calif. Nov. 7, 2008.

---------------- 2008. Biota report for La Habra Heights reservoir relocation project, La Habra Heights, Los Angeles Co., California. Prepared for Civiltec Engineering, Inc., Monrovia, California. Oct. 3, 2008.

Forde, A.M. and E. Read, with D.S. Cooper, D. Crawford, I.P. Swift and R. Francis, Jr. 2008. Biological Assessment, Vista Canyon Ranch, Los Angeles Co., California. Prepared for Vista Canyon Ranch, LLC (Valencia, Calif.) and The River Project (Studio City, Calif.), August 27, 2008.

Cooper, D.S. 2008. Protocol survey for California Gnatcatcher *Polioptila californica* at "Terraces at Hidden Hills" in Calabasas, Los Angeles County, California. Prepared for Impact Sciences, Camarillo, California. June 12, 2008.

---------------- 2008. Protocol survey for California Gnatcatcher *Polioptila californica* at "KRLA site" near Walnut/Covina, Los Angeles County, California. Prepared for Impact Sciences, Camarillo, California. June 12, 2008.

---------------- 2008. Initial Biological Assessment: Mission Creek. Prepared for Los Angeles Conservation Corps. March 31, 2008.

Hamilton, R.A., D.S. Cooper, W.R. Ferren and C.P. Sandoval. 2008. Biological Resources Assessment, 30732 Pacific Coast Hwy., Malibu, California. Prepared for Malibu Bay Company, Feb. 19, 2008.

Cooper, D.S. 2007. Protocol survey for California Gnatcatcher *Polioptila californica* at Hidden Hills Golf Club, Norco (Riverside County, California), Spring 2007. Prepared for Impact Sciences, Camarillo, California. July 19, 2007.

---------------- 2007. Protocol survey for California Gnatcatcher *Polioptila californica* at the "pit", a former quarry site adjacent to Claremont College (Los Angeles/San Bernardino counties), Spring 2007. Prepared for Impact Sciences, Camarillo, California. June 22, 2007.

---------------- 2006. Birds of Malibu Lagoon: Final Report, 2006. Prepared for the Resource Conservation District of the Santa Monica Mountains, Topanga, California, August 8, 2006.

---------------- 2005. Breeding bird survey, Nicholas Creek mouth, Malibu, California. Prepared for the Wishtoyo Foundation, Oxnard, California, June 10, 2005.

---------------- 2005. Debs Park Teacher-Naturalist Training Manual, Audubon Center at Debs Park, 45 pp.

---------------- 2004. Rapid Biological Assessment of Elephant Hill (Los Angeles/South Pasadena, CA). May 25, 2004.

---------------- 1999. Debs Park Habitat Management Plan. Audubon Center at Debs Park, 24 pp.

Scott, T.A. and D.S. Cooper. 1999. Summary of avian resources of the Puente-Chino Hills Corridor. January, 1999. Available (Online): http://www.hillsforeveryone.org/

Cooper, D.S., C. D'Agosta, K. Garrett, L. Dwyer-Hade, V. Jigour, A. Thomas, K. Bullard, S. Manion, T. Alsobrook, M. Campbell, A. Dove. 1998. Environmental review of vegetation removal in Los Angeles County rivers and streams. Mountains Recreation and Conservation Authority/EPA Region IX, San Francisco.

<u>Latin America</u>

Cooper, D.S. 2007. Ecological assessment of five coffee farms in north-central Nicaragua. Prepared for Rogers Family Companies, Apr. 28, 2007.

---------------- 2006. Ecological assessment of seven coffee farms in the Soconusco region of Chiapas, Mexico. Prepared for Rogers Family Companies, Dec. 1, 2006.

Popular articles

Los Angeles County Sensitive Bird Species Working Group (incl. Daniel S. Cooper). 2008. Los Angeles County's Sensitive Bird Species. *Western Tanager* (newsletter of Los Angeles Audubon Society) 75:E1-E11.

Cooper, D.S. 2007. Wildlife response to the Griffith Park fire. *Water Wise* (newsletter of the Los Angeles and San Gabriel Rivers Watershed Council) 11(1):10-11. Fall 2007.

---------------- 2005. A duck club in L.A.?: The near-death and slow recovery of the Ballona Wetlands. *California Waterfowl*. June/July 2005.

---------------- 2005. Birding the Ballona Wetlands. *Winging It* (newsletter of American Birding Association). 17(2):1-4.

---------------- 2000. Rediscovering the lower Arroyo Seco. *Western Tanager* 67:1-3.

---------------- 2000. ("Off the beaten path") The Huntington Library. *Western Tanager* 66:6-7.

---------------- 1999. From the front lines: a birding tour leader offers his perspective. *Wildbird*. October, 1999.

Conference Presentations

Cooper, D.S. Cactus Wrens of the Puente-Chino Hills: 1998 - 2008 (presentation). *Coastal Cactus Wren Symposium*. April 1, 2008. Irvine Ranch Water District, Irvine, CA.

---------------- Rethinking "Shade-grown" (presentation, in Spanish). *Annual meeting of Rogers Family Company coffee suppliers* (c. 50 growers from throughout Latin America). August 2, 2007. Selva Negra Lodge, Matagalpa, Nicaragua.

---------------- Wildlife of Griffith Park (presentation). *Los Angeles and San Gabriel Rivers Watershed Council Symposium*. June 20, 2007. The Autry National Center in Griffith Park, Los Angeles, CA.

---------------- Avian extirpation and colonization at the Ballona Wetlands, Los Angeles County, California (presentation). *Southern California Academy of Sciences Annual Meeting*, May 20-21, 2005, Loyola Marymount University, Los Angeles, CA.

---------------- Important Bird Areas of California (presentation). *California All-Bird Conservation Workshop*. November 15-16, 2004, Sacramento, CA.

Cooper, D.S. and E. Galicia (co-moderators). Community participation, birding trails and birding festivals – tools for IBA outreach and implementation. *Important Bird Areas Conference*, August 14, 2004. Sierra Vista, AZ.

Cooper, D.S. An exploration of the importance of the Salton Sea and associated ecosystems to birds (presentation). *California Water Dialogue*, Sept. 16, 2003. San Diego, CA.

---------------- Fall migration of shorebirds along the lower Los Angeles River (poster). *27th Annual Meeting of the Western Field Ornithologists*. October 10-13, 2002. Irvine, CA.

---------------- The use of riparian bird species as indicators of restoration success in the Los Angeles area (presentation). *Southern California Academy of Sciences Annual Meeting*, May 19-20, 2000, University of Southern California, Los Angeles, CA.

Cooper, D. and T. Scott. Patterns of breeding bird distribution in a large urban open space reserve (presentation). *4th International Urban Wildlife Conservation Symposium*. May 1-5, 1999. University of Arizona. Tucson, AZ.

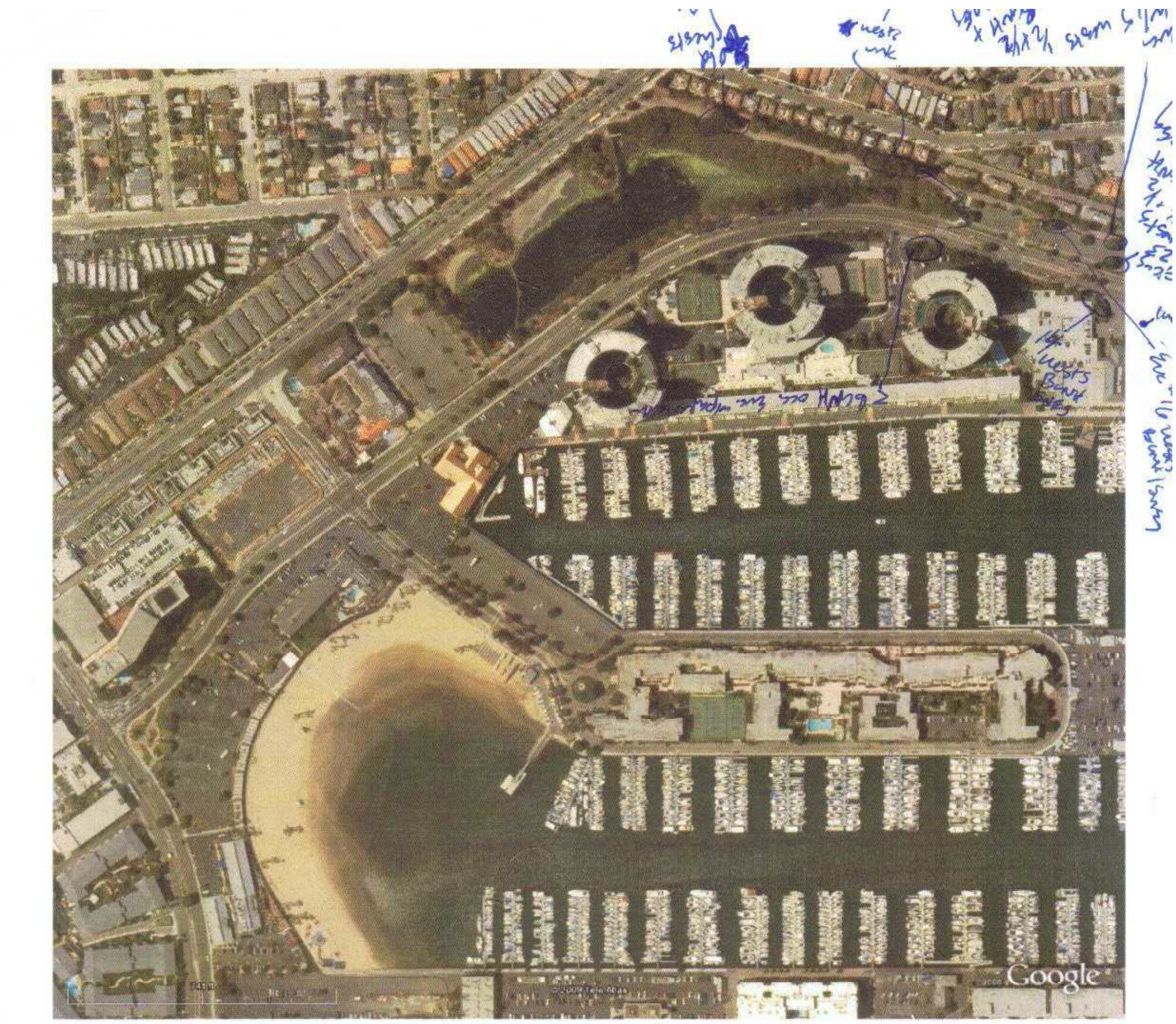
Wehtje, W. and D.S. Cooper. Range expansion in the Great-tailed Grackle (poster). *North American Ornithological Conference*. April 6-12, 1998. St. Louis, MO.

Cooper, D.S. Southern California's camouflaged national parks: military reservations (presentation). *Nature's Workshop: Environmental Change in 20th Century Southern California*. Sept. 18-20, 1997. California State University, Northridge, CA.

APPENDIX B: COPIES OF FIELD NOTES

This appendix consists of scans of the 2009 field notes taken by Robert A. Hamilton (RAH) and Daniel S. Cooper (DSC) in order to prepare this Conservation and Management Plan. In most cases, RAH's cryptic field notes were transcribed from a field notebook to a more legible notebook upon return to the office after completion of the field work. DSC also did this, but then the legible notebook was lost, so DSC's original field notes are provided here.

Notes of Robert A. Hamilton



5/20/09 RAH
DSC

5/2/09

Full grown + yng. DCCO

9 DCCO + 1 GBHE

6 DCCO nests + 1 old GBHE nest

5/20/09 Fox Squirrel

3 large nest in 2 pines. Greg in one

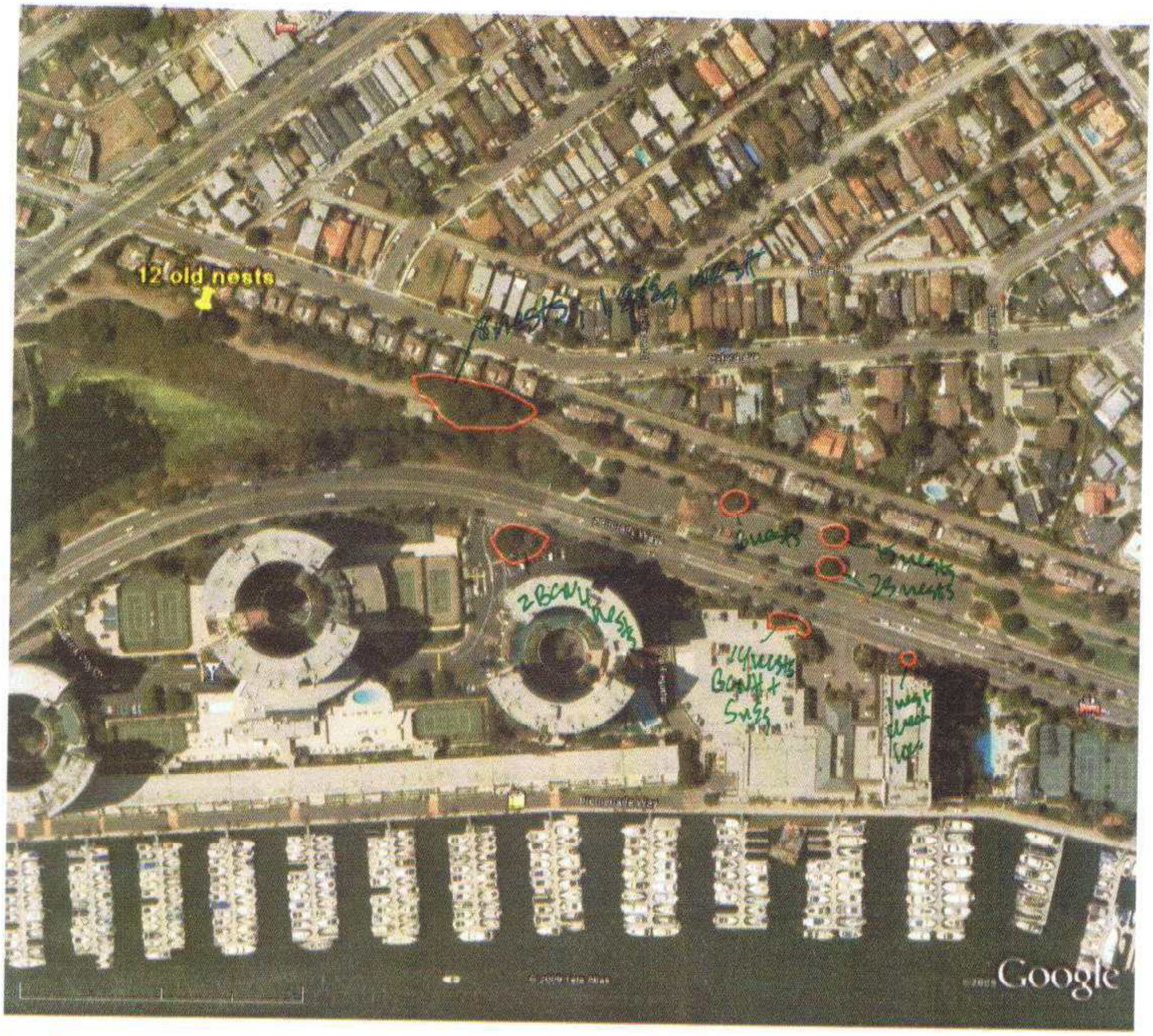
8 GBH nests
One young Calli

6/22/09
1400-1700
sunny, breezy ~68°F

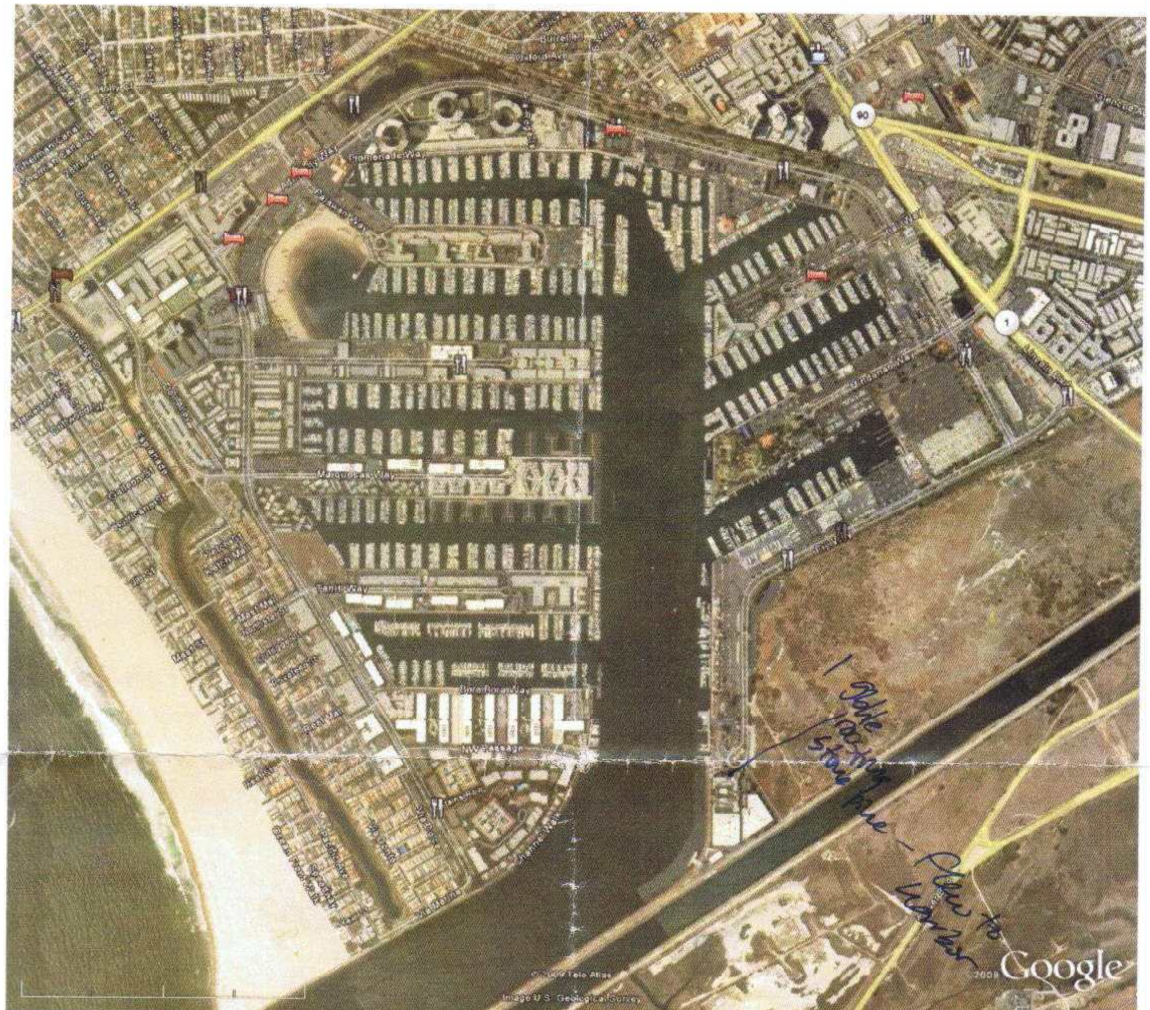
Pines w/ 15 large nests 40-50' up
Probably all GBHe

Palawan Way - No Nests
Jamaica Bay Inn - No "
Via Marina. Del Rey Shores Apts " "
Tahiti Way - " "
Bora Bora Way - See notes
Mariners Village - 15 nests 40-50' up

Via Dolce + Venice Canal - " "
Marquesas 9 BCNH nests
along median
@ east end.
Several BCNH ads in trees
roosting. Coral trees @
end w/ guano.



6/23/09



6/23/09

1900–
63°; wind 7mph; clear

Villa Venetia
DCCO nests mostly empty.
~19 large young out on branches of monterey cypresses

Admiralty

Snag w/ ly. yng BCNH – fledglings @ oxford side – nested earlier in season per John cotton

fledglings @ marina side
1 ad.

Egret
1 adults
5 nestlings

AdvH Ublde

Marina del Rey 7/8/09

1300 - 1800 Coop's Loop

Sunny, light breeze, ~76°
Scattered clouds → breeze picking up to ~6mph; clouds rolled in to form a high, thin, film. End temp 65°

Beethoven - Confluence

Mid-tide; some sandbar exposed

GBHe - 4 adults in tall grass
CaTe 32 ads
WeGu ~100 most ad's
CaGu 8
BrPe 12
Mall 9
BarS 2
Gadw 2
AmCr 2

Del Rey Lagoon

WeGu 18
AmCr 15
MaSp 1
SnEg 13ads
Will 2ads
Mall 4
GrEg 1ad.
BlOy 2 (landed briefly)

Ballona Creek up from Pacific. p. 2 7/8/09
Hmgu 6
DCCo 2 ads
Will 75 ads
Wegu 5
BlOy 2 - flew to Del Rey briefly)
Mago 8
LBCu 1
ElTe 2, 1
BrPe 1
SnEg 2 ads Ph.
Whim 1 Ph.

Ballona Wetlands	Ad	Juv
~~gbHeron~~ gbHe	~~||||~~ |||	~~||||~~
BCNH		|||
TrSw	|||	
SnEg	|	
BSSP	||| singing	
MoDo	|	
GrEg	| ph.	
GrHe	||	
EuSt	50	

9 roosting & 1 feeding near lower salt panne

MDR loop

1530-1800 High tide 7/14/09

Sunny/hazy 76°-71°

light breeze

Oxford Basin

	Ad.	Juv.
SnEg	//// ph.	
GrEg	// ph.	////
BcNH	/ ph.	卌 / ph

admiralty parking lot: Most nests now vacant. Still some SnEg feeding mobile young. GrEg flew in to feed young. Nest ~45' up at top of euc. 2 photos of adult SnEg.

Ballona Lagoon

SnEg 1 ad.

Ballona Freshwater Marsh

Gadw ♀ w/ 6 med. young

Como 1 ad.

p. 2
7/14/09

Beethoven	Ad.	Juv.
GbHe	卌 I	III
SnEg	卌	
BrPe	卌 I	IIII
BuSt	I	

Ballona Wetlands	Ad.	Juv.
GrEg	I	
GbHe	II	
SnEg	II	
BcNH		II ph.

Del Rey Lagoon (both [illegible] - hi tide)
SnEg 1 ad.

Ballona Creek
DCCo 1
HmGu 1
Will 100
MaGo 10
CaTe 1

Ballona Wetlands p3 7/14/09

BbPl 10
LeSa 15, 10, 10
LbCu 1
SePl 1 } ph.
SnPl 1 }
WeSa 1
SbDo 11
TrSw ♀ feeding @ box
BSSP ✓
GrHe 1 juv. ph.
EuSt 250

MDR Loop 7/15/09

1215-1500 4mph-6mph

80°-78° hazy, clear tide mid-rising

Beethoven	Ad.	Juv.
GrEg	1	
SnEg		1
GbHe	111	
CaTe	33	
GrYe	1	
WeGu ~60		
CaGu 8		
BnSt	3	
PbGr	1	

Mall - several fams.

Ballona FWM	Ad.	Juv.
GbHe	1 Ph.	11
DCCO	2	

Del Rey Lagoon

HeGu 13
CaGu 1
WeGu 7

GrEg 2ad.
SnEg 2ad.

p. 2 7/15/09

Ballona Creek

Hmgu ||
Wegu |||
CaTe |
Will 50, 50, 20, 20
Whim 2
Mago 20
ElTe 7
SnEg 1ad.

Ballona Wetlands

	Ad.	Juv.
Sbke-ph.	||||	~~||||~~ |
SnEg	|||	
TrBw	1 @ box	

Lesa 20, 20, 5, 5 (50 ads)
BSSP ✓
HoOr 1 juv. in Acacia

Oxford Basin

	Ad	Juv.
SnEg	|||	||||
GrEg	|||	

MDR Loop 7/23/09
11:00 - 13:30 75-81° winds 5-8 mph

Villa Venetia
Still at least 5 active DCCO nests w/young. Ad. DCCO hanged @ top of cypress by fishing line.

Ballona Creek near UCLA Rowing
Will 120 inc. 4 juvs
Whim 20 ad's
Margo 1

Area A
GbHe 2 ads. - 1 GbHe flying across creek

Fiji Way
BCNH 1 year-old roosting in Ficus

4 SnEg flying out across Marina - low to water. One dropped into Ballona Creek near Pacific Ave. 3 flew out beyond N. Jetty & Venice Beach.

p. 2 7/23/05

Del Rey Lagoon

		Ad.	Juv.
Sneg.	roosting in Acacia photo	||||	||

Amcr ~~||||~~

Lbhe ph 1 mottled white under chin

Hmgu 5

Wegu 5

Ballona Creek - (see earlier)

Bloy 1ad. (ph)

BSSP |||| along channel

Cate ~~||||~~

Hmgu ||||

Will 190

Whim 20

Dcco 1 juv. 1 ad.

Elte 59 ads 2 juvs

Mago 25

~~E~~ SBDO 7

p.3 7/23/09

Ballona Wetlands

	Ad.	Juv.
SnEg	/	///
BCNH		/
GbHe roosting →	7	→ 7 (1 foraging ph)
BCNH		/
DCCO	2	
GrEg	/	
CaTe	42	
BSSP ✓	5	
ElTe	45	1 begging

BbPl - flock in middle - # unknown

Ballona Farm

SnEg 1ad. ph
GrEg 1ad.
GbHe 1ad. 1juv.

Oxford Basin

	Ad.	Juv.
SnEg	~~||||~~ ||	~~||||~~ ||||
GrEg	||||	||
BCNH				
GbHe ph				

p.4 7/23/09

Beethoven	Ad.	Juv.
GbHe	////	
SnEg	////	/
WeGu	50	
CaTe	4	
LeSa	70	
BbP	40	
RuTu	1 ph.	
WeSa	5	
BrPe	2	2
BnSt	2	
+GwGu		1 ph.
CaGu	20	
RbGu	5	

MDR Loop 7/30/05

0900-1345
65-82°
100% OC → clear
calm → light breeze

Marquesas
BCNH - nests in median
~~~~ ||||
8 nests in melaleuca, 1 in Ficus

Tahiti Open Lot
2 HOSP ~30
HOFI ~20
ATFL 1 ad.
MODO 3
EUST —

End of Tahiti
Cluster of 4 large coral trees
w/much whitewash.

Bora Bora
1st pine - nest of GREG empty
2nd pine - 2 [illegible] nests - also empty
Euc nests - no birds present
~~~~

p.2 7/30/09

Fuel/Bait Dock		Ad.	Juv.
GrEg	Ph	1 Ph	
BcNH	juv summary photos	1	1111
BrPe			7 Ph
GrHe		1 Ph	

Ballona Lagoon

SnEg - 4 ads. foraging

Oxford	Ad	Juv.
SnEg	11	11
GrEg	111	11 Ph.
GbHe	1	
DCCO 1		

Admiralty

Still some SnEg nests active.
1 nest of BCNH in coral tree w/end parking lot.

Area A

GbHe 9 ads. in iceplant (Ph)

p.3 7/30/09

Sportfishing area

SnEg 5 ad, (fl)
SbHe 1 ad. fl
BCNH 1 juv.
BrPe ~50 most juvs

Del Rey Lagoon — Ad. — Juv.

SnEg foraging — //
GrEg " — //
LbHe — — 1 for. fl

Ballona Wetlands — Ad. — Juv.

SnEg — 1 roost — 1 for.
SbHe — //// 2 roost 2 for. — 6 roost
GrEg — 1 roost
LbCu — 1
CaTe — 11

Ballona Creek

PY 7/30/09

	Ad.	Juv.
EITE	78	2
SnEg	1	
RuTu	~~||||~~	
Will	310 some juvs	
Mago	15	
SbDo	//	
Whim	///	
BbPl	/	
BlOy	2	
WaTa	1	

Ballona ~~Fu~~	Ad.	Juv.
SnEg 1 roost 1 foraging	11	
SbHe		1 juv.

Beethoven	Ad	Juv
GbHe	11 roost	1 for
SnEg	//// roost	/
BrPe	///	////
Gwg		/

Long Beach Herons 8/3/09
Ocean - Bennett to Granada
2 large Ficus @ Bennett - photos
~30 SnEg + BCNH nests
~25 more @ Prospect - photos
Melaleuca nests

Terminal Island
Ficus roost 18 ad BCNH + 1 juv
Ways Street photo

US custom house 300 S. Ferry
5 Pines w/ ~20 BCNH nests
4 juv's seen - photos
1 juv ph. - Federal Bldg

Queen Mary 8/4/09

Parking lot cashier - 2 big Ficus trees w/ 22 BCNH nests.

POLB - 3 gbhe nests in safety lights ~60' up.

Long Beach Yacht club - coral tree w/ 3 BCNH roosting

Naples Plaza @ The Toledo
4 gbhe nests 50' up in palms.
Large young in one nest.
photos.

(8/5 notes
on last page)

Long Beach Herons 8/5/09

Schooner or Later 1st GbHe nest
Washingtonia 50-60' tall

BCNH ad. roosting Moreton Bay Fig

White wash under NZ Xmas
trees- no birds seen

White wash under Ficus - recently
trimmed. 2 ad. BCNH - photo

Khoury's - GbHe nest ~50' up - palm

CoHa juv w/ HoSp ♂ photos

GbHe nests in palms along
walkway ⊥ to parking lot
near Restroom A6.
卌 ||

Ficus @ Gangway 10 w/ likely BCNH nest

proximity to H_2O important

Notes of Daniel S. Cooper

dR lagoons 7/9/09|0840
Low tide

nt. Conf1.
BCNH – ad F
– GBHE ad F: 1
SNEG ad F: 13
im F: 11
GBHE im F: 1
(1 WESA) DCCO 1 ad F

Cr
SNEG ad F: 1
GBHE ad flying downstream to DRL

3W GBHE im F: 5
SNEG ad F: 1

BFM
DCCO ad/imm R
WREG U R-1 ad F-2
SNEG ad F-1
BCNH SY R-1 juv-1 Agy-3
imm

Ballona Lag.
SNEG ad F-3,3
GREG ad F-111
GBHE ad F-1
im F1

Oxford

SNEG juv F · 7/11
ad F · 3/11
juv R · 3
a R · 1

BCNH juv F · 4

1 ad SNEG flying in from NE

1 ad SNEG for Venice Canal
@ Wash.

7/13/09 10:40
med. low
tide

Conf.
4 BHE 3 ad F
1 ad R

DRL med. side
low
SNEG 3 ad to 2 ad R
LBHE 1 ad R
(17 WESA, 2 LEBA)
(CALT @ DW)
DW west ø

BW – e. slough 2
GBHE juv F. 4
juv R. 2
ad R. 1
(F&F: BBPL · 1 alt
EGTE juv – 2)
LESA · 15

BCr – ø
BFM. 11:30
GBHE ad F. 1
BCNH SY R. 1
GREG ad R. 1
BCNH 1 juv F
SNEG 3 juv F
~~1 ad F~~
ad F 1

BFM... DCCO 1HY F

B Lagoon 12:20

Oxford ~high tide

SNEG ad F

ad R ||

juv F ||

juv R |

BCNH juv R ||

juv F |

GBHE ad F

7/16 0645
CoPl. 18W #de
3 ad. SNEG flying
upstream

[GBHE hunting on field
N of BFM]

DRL SNEG 1 ad F
BC (CALT. ?):
SNEG ad F
BCNH Juv F

BW. ø
BCGR calling fr. DW

Ox Pond 05/10

~~high~~ tide...

SWEG ad F 1
ad M 11
juv F 1
juv M 111

BCNH juv F 1

↑ egrets in eucs on
Adm. Way ...

20 July 11:30 high tide

Cont.

SNEG ad R · 3, 1

jw R · 2

U F · 1, 1

GBHE ad R · 1

U R · 1

BRL · SNEG · 1 wh R from

B.Cr · SNEG · ad flyg ds , F

DCCO · 1 ad E / 2 SNEG , F

(jw SOSP) 2 · · ad F

BW - c. of e, channel

~~GBHE~~ [illegible]

GBHE · 9 ad R
2 juv R
2 juv F
GREG 1 ad R
GBHE 2 juv F just
w. of e. ch.

along slough on ent'ce to mound

~10 BSUS along channel

BFM · 12:20 – Ø
spraying @ w. end w/
leaf-blower

Coast Guard (Area A)
GBHE · 1 ad R on
ground

12. Heron.

GBHE 2ad/2juv roosting
nests - 1 ad R
GREG.

BLagoon. Ø
Ox fnd 12:50 high tide
GREG. ad F. 2, 1.
juv F 1
juv R 1
ad R
SNEG ad F 2
juv F 3
ad R.
juv R 11.
GBHE juv R. 1

0700
7/27/09 v. low tide

Conf BCNH · juv F. 1

DRC.
SNEG j F. 2
ad F. 5
GRHE 1 ad F
BW GREG 1 ad Fgy
(~~outlet check~~ BCN) Ø

B. Lagoon
SNEG ad F. 7
Juv F. 1
GREG ad F. 2

BCNH juv F· 1
SNEG ad F·3,2
GREG j F 1

By Oxford B. Little

GREG juv F·1|
unk·1 unk F 1
ad F 1

SNEG juv F 1
ad F·1
unk F·1

Misc MdR · 7/24 09-1000

SNEG · 1 ad F "Mothers B."?
end of Bali - ∅
Palawan · ∅
Burton Chace:
GBHE · 1 ad R ctp
boat canopy
Fisherman's Vill.
GREG · 2 ad F
BCNH 1 ad R
1 juv F
SNEG 2 ad F
1 ad R
DCCO. 20 juv R
1 ad R

7/30 Lg tree
4:48 pm

Confl. SNEG 5 ad F
DRL Ø

BW - west
GREH yb F-1
SNEG ad F-8
DCCO 1 ad F
GBHE ad R-3
juv F-2
juv R-2

BW - E
BCNH SY F-1
GBHE juv F-1

BW - E slough
4 GREG unk F. 1
4 BHE unk R. 2
BCr BCNH . juv. 1 flying
north
SNEG . 1 of the
8 @ BW - west flew
N across to MdR
1 BHE . ad flying
from DRL up ?.
BFM - Ø
Fish wh. ↑ BALE
- BIOPHYS TEC

Area A
GBHE · ad R · 3
12

Ox fwd – G:
SNEG juv. F · /
ad F · |||
DCCO juv R · 1
BCNH juv F 2
juv R – 2
GBHE juv F · 1
GREG juv F · 1
ad F · 1

APPENDIX C: MAPS & PHOTOS OF OTHER LOS ANGELES COUNTY HERONRIES

Table 3–1 and Figure 3–8 in this Plan refer to other current nesting colonies of herons, egrets, and cormorants on the coastal slope of mainland Los Angeles County. This appendix shows some of these colonies in greater detail, including some representative photos of selected sites.

Figure C–1. In August 2009 RAH found at least 11 apparent Great Blue Heron (GBHE) nests in Washington Fan Palms at Alamitos Bay and Naples Island, at the mouth of the San Gabriel River in south Long Beach. Also present was one apparent Black-crowned Night-Heron (BCNH) nest in an Indian laurel and several roosting adult night-herons. As shown here, the birds are nesting and roosting in non-native trees in an urban marina setting.

Figure C–2. Three Great Blue Heron nestlings photographed on 4 August 2009 in a Washington fan palm at the corner of The Toledo and East Naples Plaza on Naples Island in Long Beach. Two birds are obvious, but only the bill of the third bird can be seen in this photo (between the other two birds).

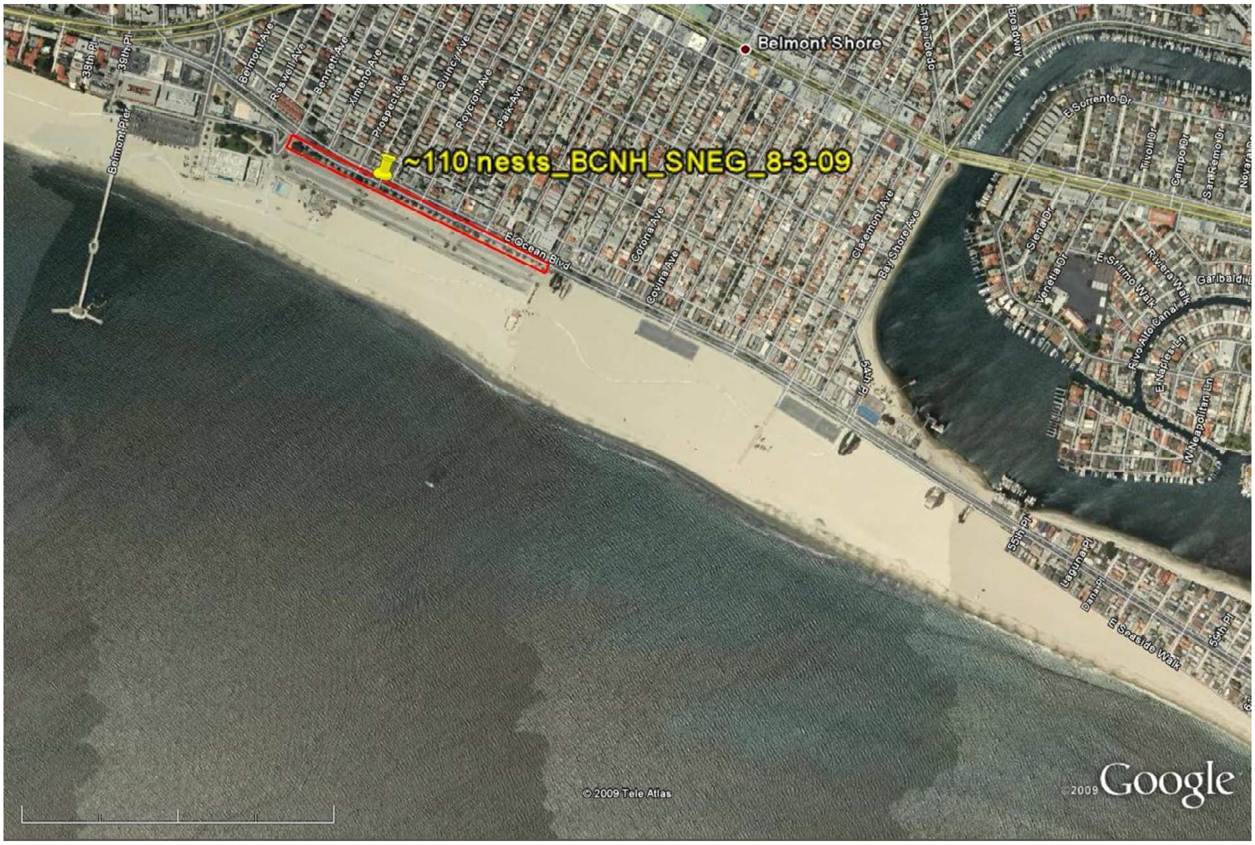


Figure C–3. In August 2009 RAH found approximately 110 nests apparently belonging to Black-crowned Night-Herons (BCNH) and Snowy Egrets (SNEG) in Indian laurel and melaleuca trees along East Ocean Boulevard between Belmont Avenue and Granada Avenue in Belmont Shore in south Long Beach. Most of the birds had fledged by the time these nests were checked, so the breakdown between the two species is uncertain, but numerous juveniles of both species were seen in these trees and we have assumed a 50/50 split for purposes of this report.

Figure C–4. Juvenile Snowy Egret photographed on 3 August 2009 in a large Indian laurel tree at the corner of East Ocean Boulevard and Bennett Avenue in Belmont Shore.

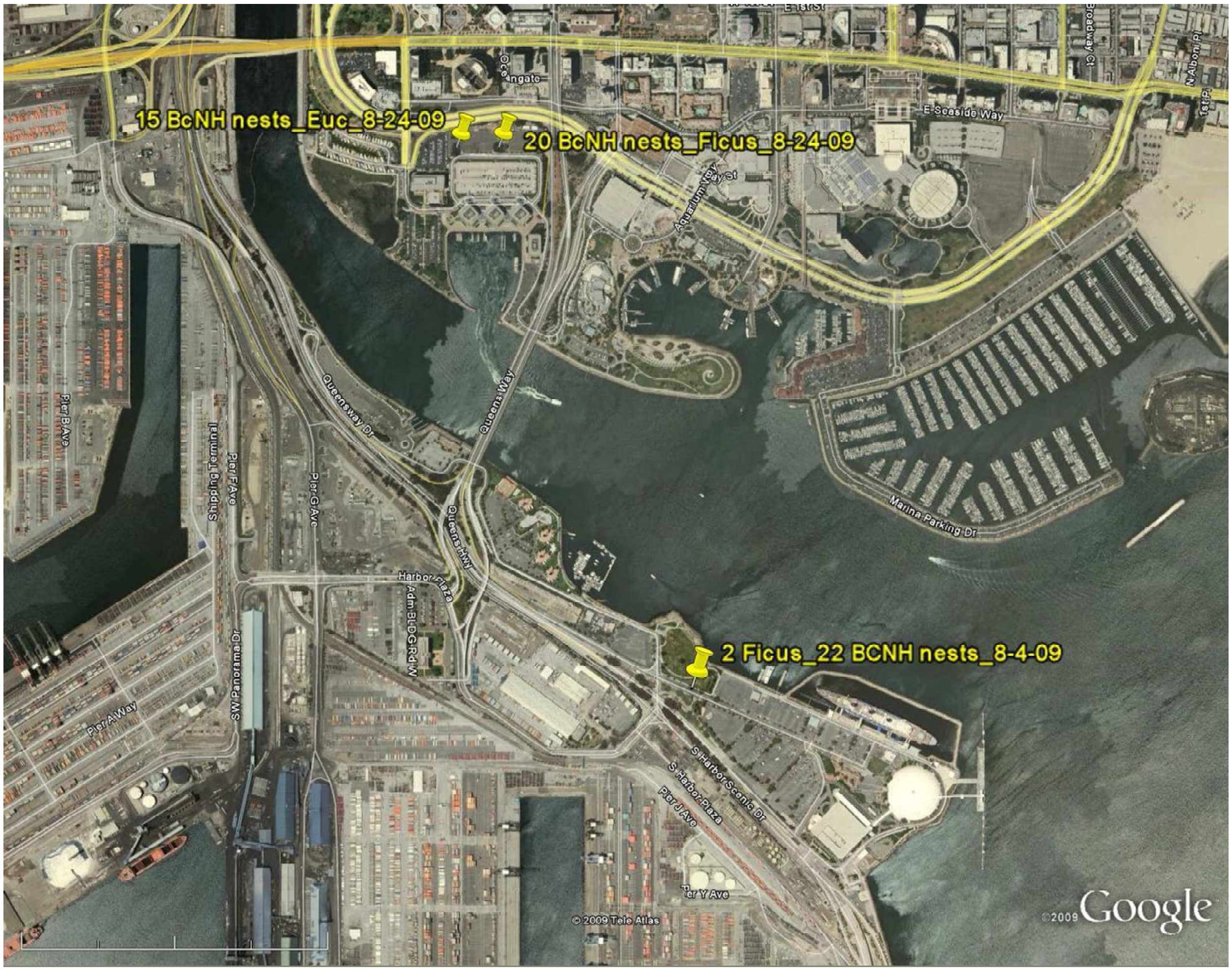


Figure C–5. In August 2009 RAH found approximately 57 nests apparently belonging to Black-crowned Night-Herons (BCNH) in Indian laurel and eucalyptus trees in the Shoreline Drive and Queen Mary sections of the Catalina Landing area, at the mouth of the Los Angeles River in south Long Beach. Juvenile night-herons were seen in all of these trees.

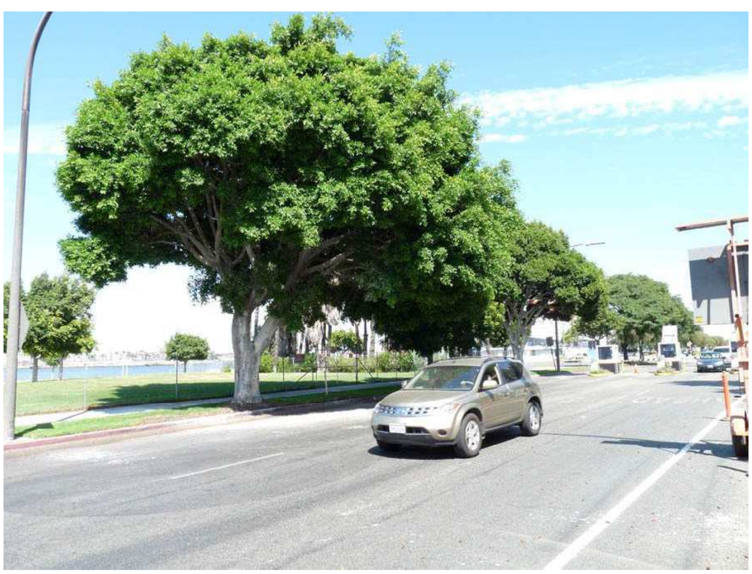


Figure C–6. Photo taken on 4 August 2009 showing large Indian laurel trees near the parking kiosk for the Queen Mary that held approximately 22 Black-crowned Night-Heron nests.

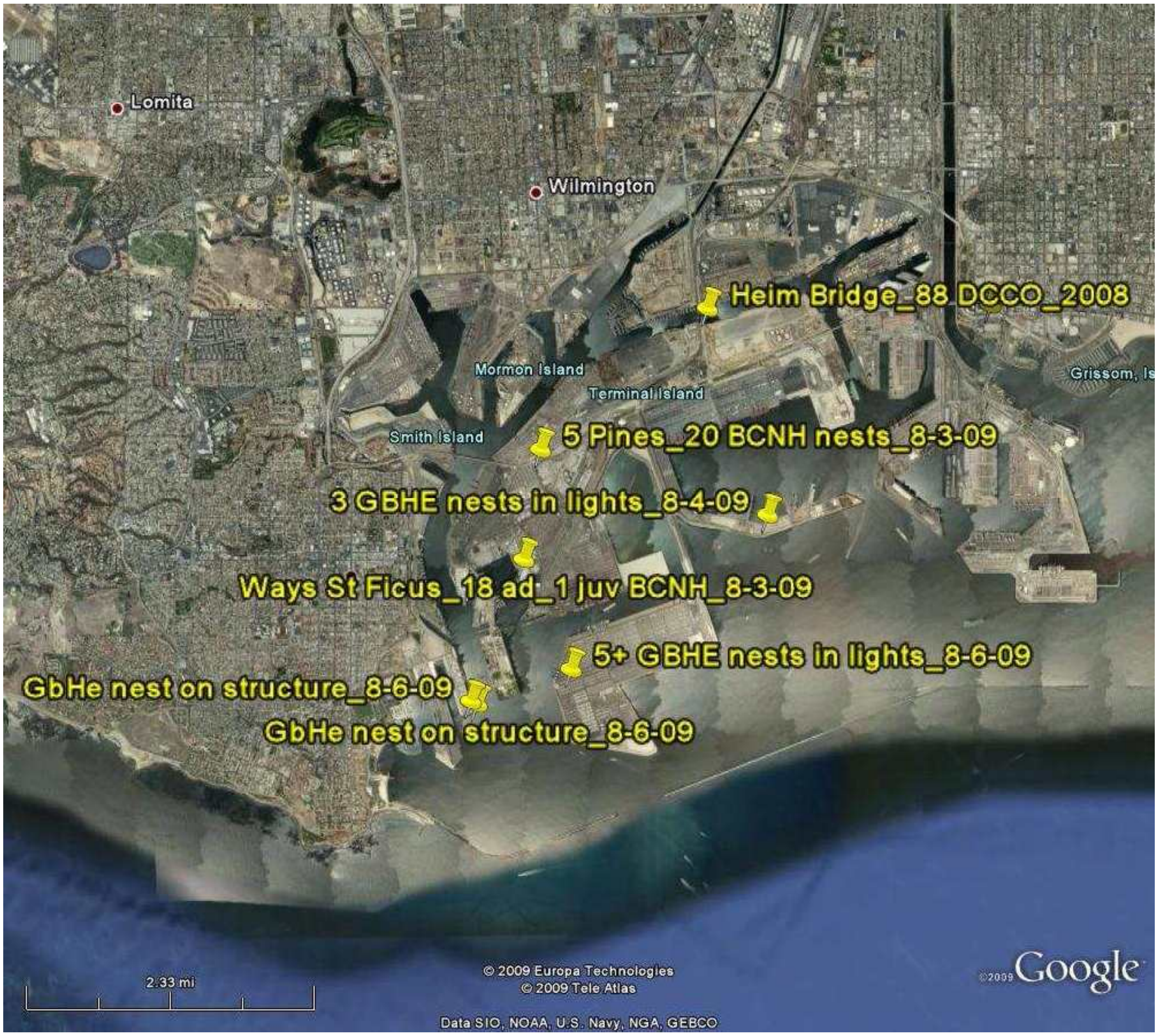


Figure C–7. In August 2009 RAH found at least ten Great Blue Heron nests on Terminal Island. At least eight were built on top of tall lights, approximately 80 feet up, at the Navy Mole (Long Beach Middle Harbor) and at Pier 400 (Port of Los Angeles); see Figures C–8, C–9. Two more were on metal structures approximately 35 feet over the water at the end of Signal Street in San Pedro; see Figures C–10, C–11. During the same period RAH documented 18 adult and one juvenile Black-crowned Night-Herons (BCNH) roosting in a large Indian laurel on Ways Street (Figure C–12); the same birds may have been associated with 20 nests apparently belonging to this species (some juveniles still present) in five pine trees just south of West Ocean Boulevard at the eastern terminus of the Vincent Thomas Bridge (Figure C–13).

Figures C–8, C–9. Photos taken on 4 August 2009 showing an apparent Great Blue Heron nest on top of a metal lighting structure, approximately 80 feet tall, on the Navy Mole at Long Beach Middle Harbor. At least ten such nests were present in this general area in 2009.

Figures C–10, C–11. Photos taken on 6 August 2009 showing one of two apparent Great Blue Heron nests on top of 35-foot-tall signaling structures located off the southern terminus of Signal Street in San Pedro. Local workers reported to RAH that Great Blue Herons fledged young from both structures during summer 2009.

Figure C–12. Photograph taken on 3 August 2009 showing the large Indian laurel near the southern terminus of Ways Street on Terminal Island that serves as a roost for Black-crowned Night-Herons.

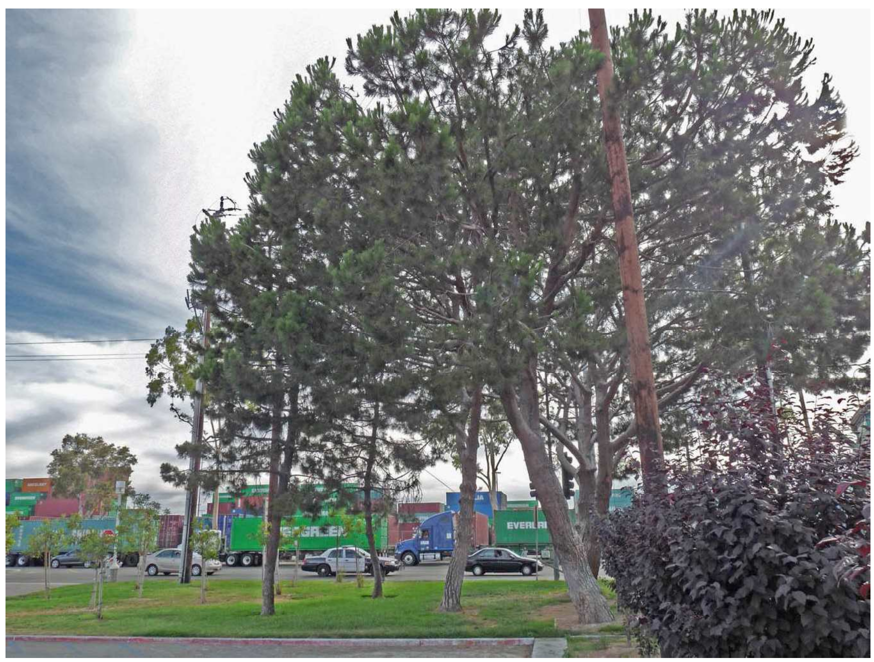


Figure C–13. Photo taken on 3 August 2009 showing the five pine trees at the north end of Ferry Street, near the eastern terminus of the Vincent Thomas Bridge, that held 20 apparent Black-crowned Night-Heron nests.

APPENDIX D: MARINA DEL REY AVIAN COMMUNITIES

This appendix lists the birds found in Marina del Rey as year-round residents, winter residents, and summer residents, compiled by Daniel S. Cooper. Additional species, which occur only in migration or rarely during winter or summer, are not included. The areas covered include Marina del Rey Harbor, jetties at the harbor mouth, Oxford Basin, Burton Chace Park, and Ballona Wetlands Ecological Reserve ("BWER") Area A.

* indicates recent breeding
[?] indicates uncertain breeding or seasonal status

Year-round residents

* Mallard (*Anas platyrhynchos*)
Brown Pelican (*Pelecanus occidentalis*)
* Double-crested Cormorant (*Phalacrocorax auritus*)
* Great Blue Heron (*Ardea herodias*)
* Great Egret (*Ardea alba*)
* Snowy Egret (*Egretta thula*)
* Green Heron (*Butorides virescens*)
* Black-crowned Night-Heron (*Nycticorax nycticorax*)
* [?] Cooper's Hawk (*Accipiter cooperii*)
Red-tailed Hawk (*Buteo jamaicensis*)
* [?] American Kestrel (*Falco sparverius*)
American Coot (*Fulica americana*)
* Killdeer (*Charadrius vociferus*) [?]
Black Oystercatcher (*Haematopus bachmani*)
Western Gull (*Larus occidentalis*)
Heermann's Gull (*Larus heermanni*)
Caspian Tern (*Hydroprogne caspia*)
* Rock Pigeon (*Columba livia*)
* [?] Mourning Dove (*Zenaida macroura*)
* [?] Eurasian Collared-Dove (*Streptopelia decaocto*)
* [?] White-throated Swift (*Aeronautes saxatalis*)
* [?] Anna's Hummingbird (*Calypte anna*)
* Allen's Hummingbird (*Selasphorus sasin*)
* [?] Black Phoebe (*Sayornis nigricans*)
* [?] Western Scrub-Jay (*Aphelocoma californica*)
* American Crow (*Corvus brachyrhynchos*)
* [?] Common Raven (*Corvus corax*)
* [?] Bushtit (*Psaltriparus minimus*)
* [?] Northern Mockingbird (*Mimus polyglottos*)
* American Robin (*Turdus migratorius*)

* [?] European Starling (*Sturnus vulgaris*)
California Towhee (*Melozone crissalis*) [BWER - Area A]
Western Meadowlark (*Sturnella neglecta*) [BWER - Area A]
* [?] House Finch (*Carpodacus mexicanus*)
Lesser Goldfinch (*Spinus psaltria*) [BWER - Area A]
* House Sparrow (*Passer domesticus*)

Winter residents

Gadwall (*Anas strepera*) [Oxford Basin?]
American Wigeon (*Anas americana*)
Green-winged Teal (*Anas crecca*)
Lesser Scaup (*Aythya affinis*)
Surf Scoter (*Melanitta perspecillata*)
Bufflehead (*Bucephala albeola*)
Ruddy Duck (*Oxyura jamaicensis*)
Red-breasted Merganser (*Mergus serrator*)
Common Loon (*Gavia immer*)
Horned Grebe (*Podiceps auritus*)
Eared Grebe (*Podiceps nigricollis*)
Western Grebe (*Aechmorphorus occidentalis*)
Pied-billed Grebe (*Podilymbus podiceps*)
Brandt's Cormorant (*Phalacrocorax penicillatus*)
Pelagic Cormorant (*Phalacrocorax pelagicus*)
White-tailed Kite (*Elanus leucurus*) [BWER - Area A]; June - Jan. only; nesting records 2002 and 2010
Peregrine Falcon (*Falco peregrinus*)
Black-bellied Plover (*Pluvialis squatarola*)
Willet (*Tringa semipalmata*)
Spotted Sandpiper (*Actitis macularius*)
Whimbrel (*Numenius phaeopus*)
Marbled Godwit (*Limosa fedoa*)
Ruddy Turnstone (*Arenaria interpres*)
Black Turnstone (*Arenaria melanocephala*)
Surfbird (*Aphriza virgata*)
Sanderling (*Calidris alba*)
Western Sandpiper (*Calidris mauri*)
Least Sandpiper (*Calidris minutilla*)
Long-billed Dowitcher (*Limnodromus scolopaceus*)
Ring-billed Gull (*Larus delawarensis*)
California Gull (*Larus californicus*)
Herring Gull (*Larus argentatus*)
Glaucous-winged Gull (*Larus glauescens*)

Royal Tern (*Thalasseus maximus*)
Forster's Tern (*Sterna forsterii*)
Belted Kingfisher (*Megaceryle alcyon*)
Say's Phoebe (*Sayornis saya*) [BWER - Area A]
Loggerhead Shrike (*Lanius ludovicianus*) [BWER - Area A]
House Wren (*Troglodytes aedon*)
Marsh Wren (*Cistothorus palustris*) [BWER - Area A]
Ruby-crowned Kinglet (*Regulus calendula*)
Blue-gray Gnatcatcher (*Polioptila caerulea*) [BWER - Area A]
Hermit Thrush (*Catharus guttatus*)
American Pipit (*Anthus rubescens*)
Orange-crowned Warbler (*Vermivora celata*)
Yellow-rumped Warbler (*Dendroica coronata*)
Common Yellowthroat (*Geothlypis trichas*)
Savannah Sparrow (*Passerculus sandwichensis*) [incl. *P. s. beldingi* in BWER - Area A]
Lincoln's Sparrow (*Melospiza lincolnii*) [BWER - Area A]
White-crowned Sparrow (*Zonotrichia leucophrys*)
Brewer's Blackbird (*Euphagus cyanocephalus*)

Summer residents

Elegant Tern (*Thalasseus elegans*)
Least Tern (*Sternula antillarum*) [breeds Venice Beach, forages widely]
Northern Rough-winged Swallow (*Stelgidopteryx serripennis*)
Cliff Swallow (*Petrochelidon pyrrhonota*)
* [?] Barn Swallow (*Hirundo rustica*)
* [?] Hooded Oriole (*Icterus cucullatus*)

Appendix E: Tree Pruning in Marina del Rey and on County Beaches in Accordance with Native Bird Breeding Cycles

FACILITIES & PROPERTY MAINTENANCE DIVISION – POLICY/PROCEDURE

SUBJECT: TREE PRUNING IN MARINA DEL REY AND ON COUNTY BEACHES IN ACCORDANCE WITH NATIVE BIRD BREEDING CYCLES

1.0 INTRODUCTION/PURPOSE

1.1 To establish guidelines within Marina del Rey and on County beaches for the pruning of trees in consideration of the great blue heron (*Ardea herodias*) and other breeding bird species to reduce or eliminate impacts on their nesting habitats.

2.0 POLICY

CODES:

2.1 California Fish and Game Code 3503

2.1.1 "It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto."

2.2 California Fish and Game Code 3513

2.2.1 "It is unlawful to take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Treaty Act."

2.3 Migratory Bird Treaty Act – U.S. Code Section 703

2.3.1 Subsection 703 states, "Taking, killing, or possessing migratory birds is unlawful." This applies to the taking of any part, nest, or eggs or any bird.

2.4 Special Purpose Permits – U.S. Code Title 50, Section 21.27

2.4.1 Subsection 21.27 states, "Special purpose permit is required before any person may lawfully take, salvage, otherwise acquire, transport, or possess migratory birds, their parts, nests, or eggs for any purpose." Said permit application shall be submitted to the U.S. Fish and Wildlife Service's Regional Office.

PROCEDURE:

3.0 Exclusions For Emergencies

3.1 The Department shall determine if an imminent danger exists to any person or property, due to a natural occurrence or disaster jeopardizing public health or safety, before proceeding with tree removal or other remedies.

3.2 The Department to photo document the occurrence and create an incident file or paper trail. Incident file shall be available for public agency inspection.

4.0 General Pruning Specifications

4.1 Special emphasis shall be placed on public safety during pruning operations, particularly when the operation is adjacent to roadways, sidewalks, and in parks.

4.2 To the extent possible, the annual tree pruning activities shall be performed from October through December of each year. The Department shall retain the services of a qualified biologist to survey the trees and make recommendations based on his findings.

4.3 Seven days prior to commencement of the annual tree pruning activities, a qualified biologist shall walk the grounds with a pair of binoculars to observe if the juveniles have fledged the nests and that the adults are not starting a new clutch.

4.4 If the project activities cannot feasibly avoid the breeding season (January 1 – September 30), the Department of Fish and Game recommends a monitoring program beginning thirty days prior to the disturbance of an active nest. The Department shall arrange for weekly bird surveys to detect any protected native birds in the habitat to be removed and any other such habitat with 300 feet of the construction work area (within 500 feet for raptors). A qualified biologist with experience in conducting bird surveys shall conduct the inspections.

4.5 In the event that the great blue herons return during the October through December period, tree pruning will be stopped until a qualified biologist assesses the site and gives his approval to proceed. He may give conditional approval to proceed within 300 lineal feet of the occupied tree.

4.6 The biologist will conduct a ground level visual inspection of the trees scheduled for pruning and notate on a plot plan those trees that he suspects have active nests.

4.7 Once the qualified biologist gives the Department notice that all of the above conditions have been met, it will notify in writing the Department of Fish and Game, the U.S. Fish and Wildlife Service, and the California Coastal Commission of its intent to commence tree pruning.

5.0 If it is not obvious from the ground that breeding activities have commenced, the biologist will make a close range observation of each nest. The close range observation is intended to provide photographic proof that there had been no eggs in the nests and that nest maintenance had not taken place within the immediate time of the surveys. Photographs of the nests will be taken from above, as near to vertical as possible. Access to the nests will be provided by a cherry picker or boom truck, with the Department's tree service contractor or own equipment on site.

5.1 Photographs of all trees with or without active nests shall remain in the Department's files for a period of seven years before they are destroyed.

5.2 After inspecting all of the trees for active nests in a specific area, the biologist will mark those trees containing active nests with caution tape to signal the tree service contractor to avoid those trees.

5.3 If an active nest is located, pruning or construction activities should occur no closer than 300 feet to these trees (500 feet in the case of an active raptor nest) provided that the work is performed with hand tools. If the work cannot be accomplished with hand tools, the servicing of these trees must be postponed until the nest is vacated, juveniles have fledged, and there is no evidence of a second attempt at nesting. The use of a chipper will be allowed outside of the 300' radius.

5.4 Limits of construction to avoid a nest shall be established in the field with flagging and stakes or construction fencing. Construction personnel should be instructed on the sensitivity of the area.

5.5 To the extent possible, the tree service contractor will begin same day servicing of those trees that are lacking active nests (s) as determined by the biologist. The trees that are lacking active nest(s) shall be serviced within three days of the biologist's inspection. Trees lacking active nests that are within 300 feet of active nests (or within 500 feet in the case of an active raptor nest) shall be pruned with hand tools only as described in Section 5.3 of this Policy.

5.6 In the event that the tree service locates an active nest (eggs, obvious breeding) not previously identified by the biologist, the contactor shall stop all work, immediately contact the Department, and cease all tree pruning activities. The Department will consult with the biologist before authorizing the contractor to resume his operation.

5.7 Those trees containing active nests will be re-inspected in thirty days to see if the nests have been abandoned and if the trees can be serviced.

5.8 Tree pruning will not normally encroach within six feet of an unoccupied nest. However, pruning may come closer and unoccupied nests may be removed on a discretionary basis if failure to do so poses an imminent danger to any person or property jeopardizing public health or safety as determined by a certified arborist or a qualified public health official. When an unoccupied nest must be removed, the Department shall photo document the occurrence and create an incident file or paper trail. Incident file shall be available for public agency inspection.

5.9 Dead palm fronds with attached nests may be removed from the tree as long as the biologist visits the sites and gives his approval.

6.0 Diseased Trees

6.1 To the extent possible, diseased trees will be removed in accordance with breeding cycles. In the case of a threat to life or property, the diseased tree shall be removed following the Department's own discretion.

7.0 Definitions

7.1 Raptor – order of Falconiformes, which includes eagles, hawks, falcons, and ospreys.

7.2 Qualified biologist – Graduation from an accredited college with a degree in biological science and two years' experience with the great blue heron and related breeding bird species.

APPROVED:

for Wayne Schaffer

Director or Authorized Representative

12/05/06
Date

SW:DWS:r

Appendix F. Policy Statement No. 34: Marina del Rey Leasehold Tree Pruning and Tree Removal Policy

POLICY STATEMENT NO. 34

SUBJECT:
MARINA DEL REY LEASEHOLD TREE PRUNING AND TREE REMOVAL POLICY

1.0 INTRODUCTION/PURPOSE

1.1 To provide Lessees with guidelines and procedures for tree pruning and/or tree removal on leaseholds located in Marina del Rey in consideration of the Colonial Waterbird species, as the term is defined in Section 4.3 of this Policy, and Raptor species, as the term is defined in Section 4.9 of this Policy, and the desire to reduce or eliminate impacts to their nesting habitats.

2.0 POLICY

2.1 This policy will be enforced by the County of Los Angeles Department of Beaches and Harbors for the purpose of overseeing the tree pruning and/or tree removal activities of Marina del Rey Lessees so as to minimize or avoid impacts to the nesting habitats established by Colonial Waterbird and Raptor species on leasehold property from time to time. Lessees, in following the procedures set forth below, will carry out their tree pruning and/or removal activities in cooperation with the County and only with the explicit authorization of the County prior to starting such work. Section 5.5 of this Policy contains procedures for Lessees or their authorized representatives for emergency situations.

This policy is an extension of the existing Internal Policy No. 23 that has been carried out by the Department of Beaches & Harbors since 2006 to manage tree pruning and tree removal activities on County-operated Marina del Rey properties. The Department of Beaches & Harbors Internal Policy No. 23, taken together with the annual nesting colonial waterbird surveys to be conducted by the County per the 2010 Marina del Rey Conservation & Management Plan, provide the basis and support for Lessee's adherence to this policy. Following completion of the County's annual nesting colonial waterbird surveys, the Department of Beaches & Harbors will identify leaseholds on which Colonial Waterbird or Raptor species are located and Lessees will be notified in writing that tree pruning activities may commence within a reasonable period of time.

Lessees are encouraged to utilize the County's annual nesting colonial waterbird surveys as the basis for part or all of the initial survey by Lessee's Qualified Biologist (as the term is defined in Section 4.8 of this Policy), where required, prior to the commencement of annual tree pruning on Marina del Rey leaseholds.

Lessee is required, under the "Rules and Regulations" provision of Marina del Rey leases, to ensure that all tree pruning and/or tree removal conducted on leaseholds located in Marina del Rey adheres to the guidelines and procedures outlined in this policy statement. However, tree pruning or tree removal performed in conjunction with new development or redevelopment and which is the subject of any existing or future conditions that may be imposed by the County or Coastal Commission shall be allowed at any time of year and is exempt from the procedures and restrictions contained in this Policy.

Considering Marina del Rey's urban character, its abundance of trees, and the propensity of local herons and egrets to nest in a variety of arboreal settings, the potential will always exist for land-use conflicts to develop in the marina environment. Such conflicts could include health risks (such as co-location with restaurant uses or risks to humans from airborne pathogens), safety risks (such as an unbalanced tree), and substantial interference with public amenities such as public parking or public walkways as has already been documented with respect to guanotrophy and subsequent dereliction of cypress trees at Parcel 64. In those limited circumstances, appropriate management responses could include pruning of trees during the non-breeding season to make them unsuitable as nesting substrates. Any such "directed pruning" should be done during the non-breeding season (consistent with the Internal Policy No. 23) which allows the affected birds an opportunity to select among ample nesting trees elsewhere in the nearby area. The annual nesting colonial waterbird surveys to be conducted by the County or County contractors are intended to include documentation of any apparent bird-human conflicts and make recommendations for how the conflicts might be resolved in ways that best respond to the Marina del Rey Conservation & Management Plan and normal public health, safety, and public-access consideration.

3.0 APPLICABLE STATUTES

3.1 California Department of Fish and Game Code § 3503

"It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto."

3.2 California Department of Fish and Game Code § 3513

"It is unlawful to take or possess any migratory non-game bird as designated in the Migratory Bird Treaty Act or any part of such migratory non-game bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Treaty Act."

3.3 Migratory Bird Treaty Act- U.S. Code, Title 16, § 703

"Unless and except as permitted by regulations made as hereinafter provided, it shall be unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture, or kill, possess . . . any migratory bird, any part, nest, or egg of any such bird. . . included in the terms of the conventions between the United States and Great Britain for the protection of migratory birds concluded August 16, 1916, the United States and the United Mexican States for the protection of migratory birds and game mammals concluded February 7, 1936, the United States and the Government of Japan for the protection of migratory birds and birds in danger of extinction, and their environment concluded March 4, 1972[,] and the convention between the United States and the Union of Soviet Socialist Republics for the conservation of migratory birds and their environments concluded November 19, 1976."

3.4 Special Purpose Permits- U.S Code of Federal Regulations, Title 50, § 21.27

"Special purpose permit is required before any person may lawfully take, salvage, otherwise acquire, transport, or possess migratory birds, their parts, nests, or eggs for any purpose not covered by the standard form permits of this part." Permit applications are submitted to the U.S. Fish and Wildlife Service's Regional Office.

4.0 DEFINITIONS

4.1 Active Nest -- a nest that is under construction or that contains eggs or young.
4.2 Breeding/Nesting Season -- January 1 through September 30.
4.3 Colonial Waterbirds -- Great Blue Heron ***(Ardea Herodias)***, Black-crowned Night-Heron ***(Nycticorax nycticorax)***, Double-crested Cormorant ***(Phalacrocorax auritus)***, Great Egret ***(Ardea alba)***, Snowy Egret ***(Egretta thula).***
4.4 Department -- Los Angeles County Department of Beaches & Harbors.
4.5 Non-breeding/Non-nesting Season -- October 1 through December 31.
4.6 Occupied Nest -- a nest that contains eggs or young.
4.7 Pruning -- the horticultural practice of cutting away an unwanted, unnecessary, or unhealthy plant part, used most often on trees, shrubs, hedges, and woody vines. Pruning includes, but is not limited to, 1) eliminating branches that rub each other, 2) removing limbs that interfere with wires, building facades, gutters, roofs, chimneys, or windows, or that obstruct streets or sidewalks, 3) removing dead or weak limbs that pose a hazard or may lead to decay, 4) removing diseased or insect-infested limbs, 5) creating better structure to lessen wind resistance and reduce the potential for storm damage, 6) training young trees, 7) removing limbs damaged by adverse weather conditions, 8) removing branches, or thinning, to increase light penetration, and/or 9) improving the shape or silhouette of the tree
4.8 Qualified Biologist -- graduation from an accredited college with a degree in biological science or ornithology and at least two (2) years experience conducting nesting bird surveys and studying/monitoring breeding Colonial Waterbirds or an arborist with a degree in arboriculture and having at least two (2) years experience conducting nesting bird surveys and studying/monitoring breeding Colonial Waterbirds.
4.9 Raptor -- Order Falconiformes, which includes eagles, hawks, falcons, and ospreys.
4.10 Tree -- a plant having a permanently woody main stem or trunk, ordinarily growing to a height over eight (8) feet and usually developing branches at some distance from the ground.

5.0 PROCEDURE

The procedures contained in the following sections 5.1 through 5.5 shall be applicable to leaseholds that have been identified as containing active or occupied nests in the most recent annual nesting colonial waterbird survey conducted by the County or County's contractor.

5.1 <u>General Tree Pruning and Non-Breeding Season Restrictions</u>

5.1.1 To the extent feasible, tree pruning on all leaseholds in Marina del Rey shall be performed during the Non-breeding/Non-nesting Season. Lessees shall retain the services of a Qualified Biologist to survey all trees potentially impacted by pruning activities and make recommendations based on their findings. In extraordinary cases, the County may allow tree pruning during the breeding season for good cause, for protection of health and safety, or protection of property from hazards. The approval of County must be in writing and in advance of the activity.

5.1.2 At least fourteen (14) days prior to tree pruning, Lessee's Qualified Biologist shall survey the trees to be pruned or removed to detect nests by conducting a ground level visual inspection of the trees scheduled for pruning. Any trees suspected to have active nests shall be noted on a plot plan by Lessee's Qualified Biologist.

5.1.3 Lessee shall provide written notice, along with a copy of the survey report and plot plan, to the Department no less than fourteen (14) days prior to the commencement of tree pruning activities. Notification must include the name and credentials of Lessee’s Qualified Biologist.

5.1.4 Seven (7) days prior to the commencement of tree pruning activities, Lessee's Qualified Biologist shall walk the entire area proposed for pruning with a pair of binoculars and/or spotting scope to determine whether the juveniles have fledged the nests and to evaluate whether the adults appear to be starting a new clutch (preparing to mate and lay eggs).

5.1.5 Following the observance of procedures described in subsections 5.1.1 through 5.1.3, Lessee shall notify the Department in writing within five (5) days of Lessee’s intent to commence tree pruning on the leasehold. In turn the Department will notify the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and the Executive Director of the California Coastal Commission (CCC) by e-mail within three (3) business days of the Lessee’s intent to commence tree pruning on the leasehold property.

5.1.6 Written authorization from the Department must be obtained before any action is undertaken that might disturb an active nest.

5.1.7 Tree pruning should not encroach within six (6) feet of an unoccupied nest. However, pruning activities may come closer in order to address imminent danger to any person or property, or a threat to health and safety as determined by a certified arborist or a qualified public health official.

5.1.8 Unoccupied nests may be removed (including those attached to dead palm fronds) only after the Lessee or its Qualified Biologist documents and photographs the occurrence. Copies of photographs and reports shall be forwarded to the Department within three business days.

5.1.9 If an active Colonial Waterbird nest is proposed to be removed or rendered unusable as a result of pruning that an arborist deems necessary to promote the health of the tree, a County Biologist, or County-contracted Biologist, should review and approve the proposed pruning. The purpose would be to provide an appropriate level of administrative biological review before actions are taken that could potentially disrupt Colonial Waterbird nesting in future years

5.1.10 In the event that Colonial Waterbirds are observed to return during the non-breeding season to nests previously thought to be unoccupied while pruning operations are occurring, activities shall be stopped until Lessee's Qualified Biologist assesses the site, gives the Lessee and Department written notice to proceed and obtains authorization from the Department. The Biologist may issue said notice to proceed conditionally within a 300-foot radius of the occupied trees (500 foot radius for Raptors).

5.1.11 Special emphasis shall be placed on public safety during pruning operations, particularly when the operation is adjacent to bike paths, parking stalls, sidewalks, driveways and the promenade. Lessee must obtain advance written approval from the Department for the closure of any public promenade, sidewalk or promenade for tree pruning.

5.2 Restrictions During Breeding Season or Near Active or Occupied Nests

5.2.1 If the tree pruning must occur during the Breeding/Nesting Season, the CDFG recommends a monitoring program to begin thirty (30) days prior to commencing activities that have a potential to disturb any nesting bird species. For a period of thirty (30) days prior to tree pruning activities, Lessees shall arrange to have its Qualified Biologist conduct weekly surveys to detect and record any protected birds in the habitat to be removed and identify any active nests within 300 feet of the proposed tree pruning activities.

5.2.2 If during the breeding season it cannot be determined from the ground whether breeding activities have commenced, Lessee's Qualified Biologist will make a close range observation of each nest. The close range observation is intended to provide photographic proof that there are no eggs in the nest and that nest maintenance has not taken place within the immediate time of the surveys. Photographs of nests will be taken from above, as near to vertical as possible. Access to the nests will normally be provided by a cherry picker or a boom truck.

5.2.3 Lessee shall forward copies of surveys, reports and photographs resulting from activities under Sections 5.2.1 and 5.2.2 to the Department within five (5) business days with notice of Lessee's intent to commence tree pruning on the leasehold. In turn the Department will notify the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and the Executive Director of the California Coastal Commission (CCC) by e-mail within three (3) business days of the Lessee's intent to commence tree pruning on the leasehold property.

5.2.4 After inspecting all trees for active nests in the specific area scheduled for pruning activities under Section 5.2.1, Lessee's Qualified Biologist shall mark those trees containing active nests with caution tape, flags, or stakes, or Lessee will arrange to enclose them in construction fencing, to alert Lessee's tree service or landscape contractor to avoid disturbing these trees during scheduled pruning activities.

5.2.5 When possible, Lessee's tree service or landscape contractor should begin tree pruning operations within seven (7) days of receiving authorization from Department.

5.2.6 Pruning activities within 300 feet of a tree with an active nest (500 feet in the case of an active Raptor nest) must be performed with hand tools. If pruning activities cannot be accomplished with hand tools, the servicing of these trees must be postponed until the nest is vacated, juveniles have fledged, and there is no evidence of a second attempt at nesting.

5.2.7 In the event the Lessee's tree service or landscape contractor locates an active nest (eggs or obvious signs of breeding or nest construction), which was not previously identified by Lessee's Qualified Biologist, the contractor shall immediately cease all pruning activities, and the Lessee shall immediately notify the Department. Lessee must consult with Lessee's Qualified Biologist to perform a re-inspection of the tree containing an active nest and follow the procedures described in this policy if Lessee desires to continue tree pruning activities.

5.3 **Dead or Diseased Trees**

5.3.1 To the extent feasible, Lessee shall remove diseased trees during the non-breeding season. In the case of a threat to life or property, the diseased tree shall be removed in accordance with sections **5.5.1** through **5.5.4** of this policy.

5.4 **Tree Removal**

5.4.1 Tree removal shall be prohibited during breeding season unless it is determined that imminent danger exists, as described in Section **5.5.1 through 5.5.2 below**, or the tree's removal is necessary for adequate emergency vehicle access or emergency utility repairs. The removal of any tree must be approved in advance by the Department, and such approval may be reasonably withheld.

5.4.2 For a period thirty (30) days prior to any tree removal activity, Lessee shall obtain weekly surveys from Lessee's Qualified Biologist to detect and record bird activities and condition of nests (both active and unoccupied) in the trees to be removed and document the existence of trees or vegetation within 300 feet of the tree removal activities.

5.4.3 Once Lessee's Qualified Biologist complies with the above conditions and provides the report, Lessee shall notify the Department in writing, and in turn the Department will notify CDFG, USFWS and the Executive Director of the CCC by e-mail within three (3) business days of the Lessee's intent to remove any tree. Lessee's notice to the Department shall be accompanied by copies of surveys reports and photographs from the Lessee's Qualified Biologist as described in Section 5.4.2. Lessee may not commence tree removal until authorization is obtained from the Department.

5.4.4 Following notification to the Department, Lessees may proceed with removal of otherwise healthy trees that lack active or occupied nests (as confirmed by Lessee's Qualified Biologist) during the non-breeding season.

5.4.5 Trees or branches supporting an active nest shall not be removed or disturbed unless a health and safety danger exists as described in Sections 5.5.

5.4.6 Special emphasis shall be placed on public safety during tree removal, particularly when the operation is adjacent to streets, sidewalks, driveways and the public promenade. Lessee must obtain advance County approval for the closure of any street, bike path, sidewalk or public promenade for tree removal.

5.4.7 Removal of any tree shall require mitigation at a 1:1 ratio. Lessee is required to develop a tree replacement planting plan for all trees to be removed, which plan should include the location, tree type, tree size, and planting specifications and a monitoring program with specific performance standards. A tree replacement monitoring report shall be prepared and then updated annually for five years. The first annual monitoring report must be submitted to the Department prior to the start of the following breeding season.

5.5 Exclusions for Emergencies

5.5.1 If the location or change in the condition of a tree located on any leasehold presents imminent danger to the public or property or jeopardizes the health or safety of any person, Lessee shall immediately notify the Department of these conditions before proceeding with tree removal or other remedies that would have an adverse impact on active or unoccupied nests. Department shall notify CDFG, USFWS and the Executive Director of the CCC before any action is undertaken that might disturb any active nests.

5.5.2 Trees posing an immediate health or safety threat that cannot be avoided (e.g., falling into traffic or fire access lane) should be pruned/removed immediately regardless of the presence of nesting birds.

5.5.3 Steps shall be taken to ensure that tree removal will be the minimum necessary, as determined by an arborist or Lessee's Qualified Biologist, to address the health and safety danger while avoiding or minimizing impacts to breeding and nesting birds and their habitat.

5.5.4 Lessee shall photograph the emergency occurrence and prepare a brief written report within fourteen (14) business days.

APPROVED:

______________________________ ____________________________
Santos H. Kreimann, Director Date

APPENDIX G: SUMMARY REPORT, NESTING BIRD SURVEY, BURTON CHACE PARK, MARINA DEL REY

HAMILTON BIOLOGICAL

June 23, 2010

Mr. George Schtakleff
Project Manager
Mackone Development, Inc.
2244 Beverly Boulevard
Los Angeles, CA 90057

SUBJECT: SUMMARY REPORT, NESTING BIRD SURVEY BURTON CHACE PARK, MARINA DEL REY

Dear Mr. Schtakleff,

Between March 1 and May 15, 2010, Hamilton Biological surveyed for nesting birds at Burton Chace Park, located in Marina del Rey, Los Angeles County (County). This work was conducted in conjunction with the renovation of the park's existing walkways. I provided weekly updates to you and relevant staff at the County of Los Angeles, California Department of Fish and Game, and U.S. Fish and Wildlife Service. This summary report briefly reviews the methods and results of our surveys, and provides recommendations based upon our findings.

SURVEY METHODS

I conducted all but one of the surveys; biologist Nathan Mudry monitored on March 11. The park was surveyed by the observer walking slowly under the trees, looking for nest structures, listening to the vocalizations of birds in the trees, and watching their behaviors. Observers looked on the ground for guano ("whitewash") that is typically present beneath heron nests. Upon locating bird nests, these were marked them on an aerial photo and an attempt made to determine the species that built them and whether they were active or left over from last year.

The surveys typically started at 7:00 a.m. and continued through the end of work, which was typically around 2:00 to 3:00 p.m. From March 8 to 15, sound pressure levels were recorded using hand-held digital decibel meters (Radio Shack brand). In order to provide the most relevant information on the potential effects of sharp, startling sounds on nesting birds, these meters were set to "C" weighting, "Lma

316 Monrovia Avenue Long Beach, CA 90803 562-477-2181 Fax 562-433-5292

From March 17 to 24, sound pressure levels were recorded using a more advanced decibel meter system. The new meter allowed for placement of the microphone at nest level, recorded both "Lmax" and the more sensitive "Lpeak" measurements, recorded levels using both "A" and "C" weighting (dBA and dBC), and logged all data automatically for later downloading to computer. Where possible, this report provides noise data as dBA Lmax.

Observers kept field logs specifying (1) the dB level registered when different construction activities, or other sources of noise, occurred in and around the park; (2) the observed response of nesting birds, if any; and (3) the time of observation. Once the new sound meter was put into use, the decibel level associated with different sources was obtained by reading the output (using computer software) and matching up the time with the observations recorded in the field log for that date. Monitors used video to document loud noises, meter readings (before the data-logging unit was available to us), and the general lack of response from the nesting and roosting BCNH.

RESULTS

Black-crowned Night-Herons

The main focus of monitoring consisted of nests belonging to 12 pairs of Black-crowned Night Herons (*Nycticorax nycticorax*; BCNH) that were active during March; see Figure 1, below.

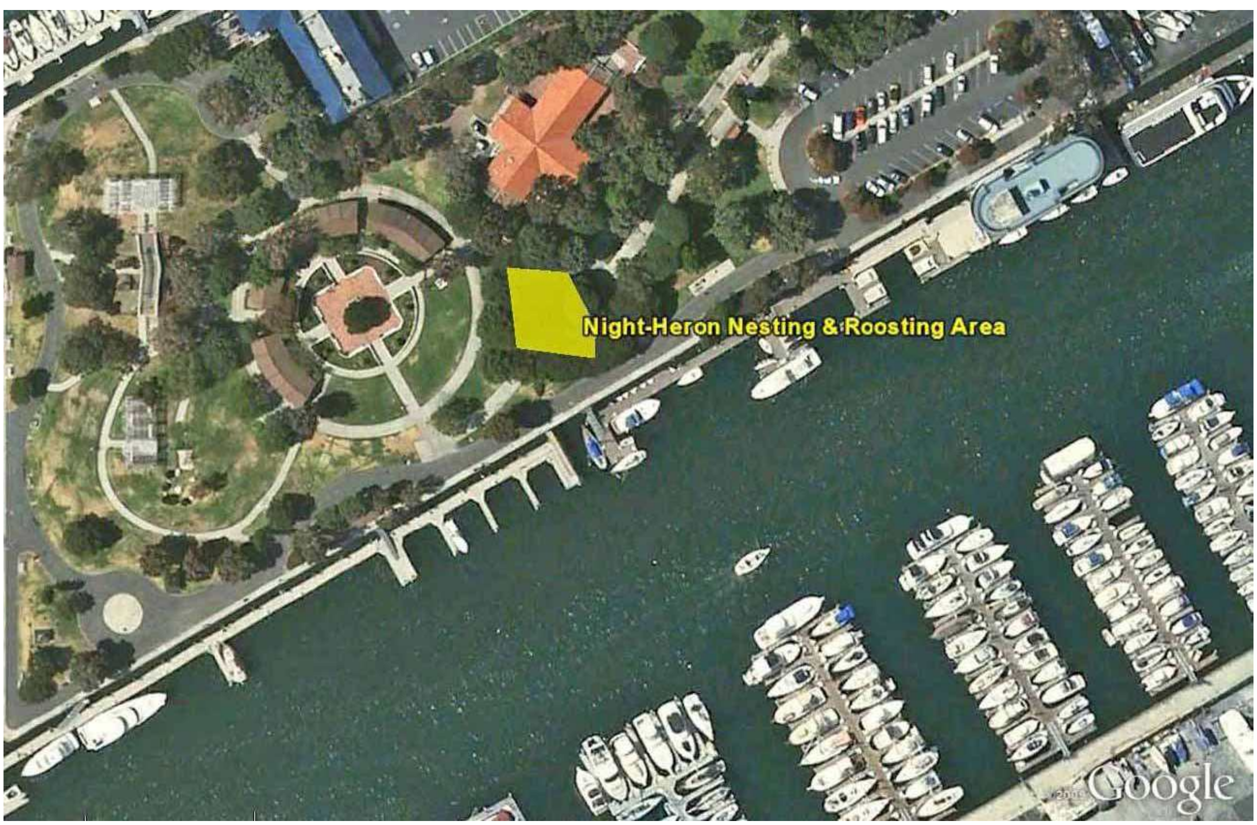


Figure 1. Location of the colony containing 12 pairs of Black-crowned Night-Herons at Burton Chace Park during March 2010. All of the nests were 25-30 feet up in Aleppo Pines (*Pinus halepensis*) and New Zealand Christmas Trees (*Metrosideros excelsa*

Typical noise levels at Burton Chace Park, resulting from normal use of the park and normal maintenance activities, were in the approximate range of 50–70 dBA Lmax. Readings occasionally rose above 80 dBA Lmax due to noise sources that included boat horns, large boat motors, and crying babies.

Seven of the 12 BCNH nests were abandoned during the period of March 8–12, the first week of monitoring. This was apparently due to predation by a Raccoon (*Procyon lotor*) that was observed at four of these nests on March 9 (Figure 2). The Raccoon was first seen sleeping in Nest 4, and later that day it was seen moving to Nest 1, 2, and 5. One of the adult BCNH at that nest scolded it for a couple minutes, but the heron did not try to attack the Raccoon. In the early afternoon, the Raccoon moved to Nest 5 by way of Nests 1 and 2, and was sleeping there when monitoring ceased that day. BCNH never returned to those nests, or to two other nests in the northern half of the colony. The Raccoon did not get into nests in the southern half of the colony during that week, and all of those nests remained active through the week.

Figure 2. This Raccoon was observed sleeping in BCNH Nest 4 on the morning of March 9, and it stayed there the entire morning. The presence of this egg-eating mammal appears to have caused the abandonment of all but one BCNH nest in the northern half of the colony during the week of March 8–12.

On May 8 (skipping ahead two months) I photographed what was presumably the same Raccoon, again sleeping in the abandoned BCNH Nest 4 (Figure 3).

Figure 3. Presumably the same Raccoon, photographed as it slept in BCNH Nest 4 on the

On the afternoon of March 22, the BCNHs at Nest 8 were subjected to vibrations and very loud noises from the breaking of concrete approximately 40 feet away (Figure 4):

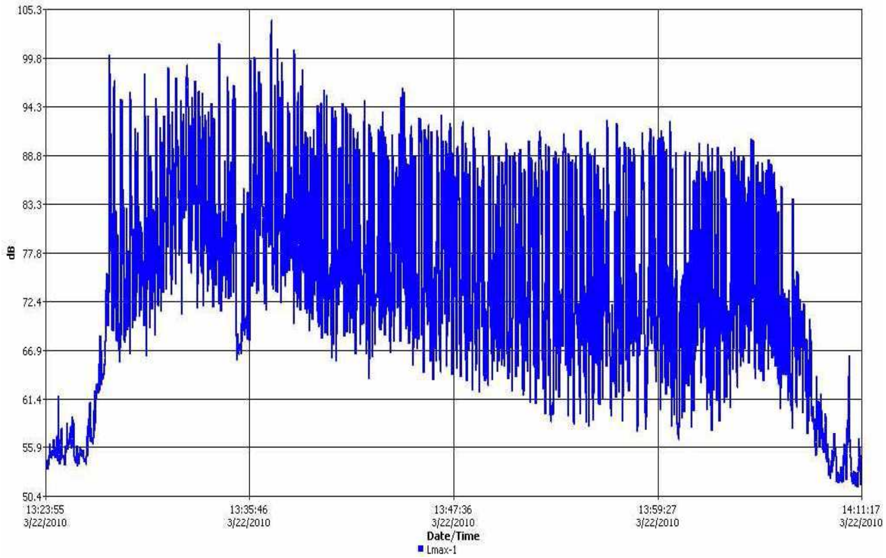


Figure 4. Graph showing noise levels (dBA Lmax) on March 22 between 1:24 and 2:11 p.m. During this period, levels were generally in the range of 85–95 dBA, and in a few instances exceeded 100 dBA.

This was the most intense construction activity the nesting herons experienced during the project. My contemporaneous notes state:

> Attending adult BCNH looked up quickly at the first impact of the pneumatic hammer, and then bobbed its head a few times before assuming an alert, but still, posture; later, the bird preened, perhaps nervously, and stood up in the nest, but remained hunched over the young in the nest; the noise was very loud and sudden, and quite close to the nest, so this was close to a “worst-case scenario” in terms of construction activity below a nest site; by outward appearances, the attending adult BCNH was definitely concerned about the activity, but not disturbed enough to either vocalize, stretch its wings, or leave the nest.

It is important that the adult did not jump up, flap, vocalize, fly, or exhibit other responses that could potentially endanger eggs or young, either by dislodging them from the nest or by exposing them to crows or other opportunistic predators. Figure 5 shows the adult BCNH at the nest that afternoon, after it had become accustomed to the nearby work:

Figure 5. Photo taken at 1:57 p.m. on March 22, showing the adult BCNH sitting on Nest 8 while concrete

I wrote the following at the end of the monitoring period that day:

> BCNH sitting quietly on nest after standing and preening for a little over an hour; photo showing this; one nestling barely visible in nest; birds not vocalizing or behaving as if disturbed.

The following morning, March 23, the nest had been predated; I arrived that day to find an adult BCNH standing next to the empty nest. It is hard to be certain, but the nest looked slightly disheveled, as though a predator had messed it up somewhat. I do not believe the predation was related to project activities since the attending adult heron stayed on the nest even during the most intensive work on March 22, which I closely monitored. As noted previously, the Raccoon that I observed predating several nearby BCNH nests on March 9 was again observed sleeping in a heron nest in this area on May 8.

Other Bird Species

Figure 6, below, shows several other native bird nests that I observed during the course of this project.

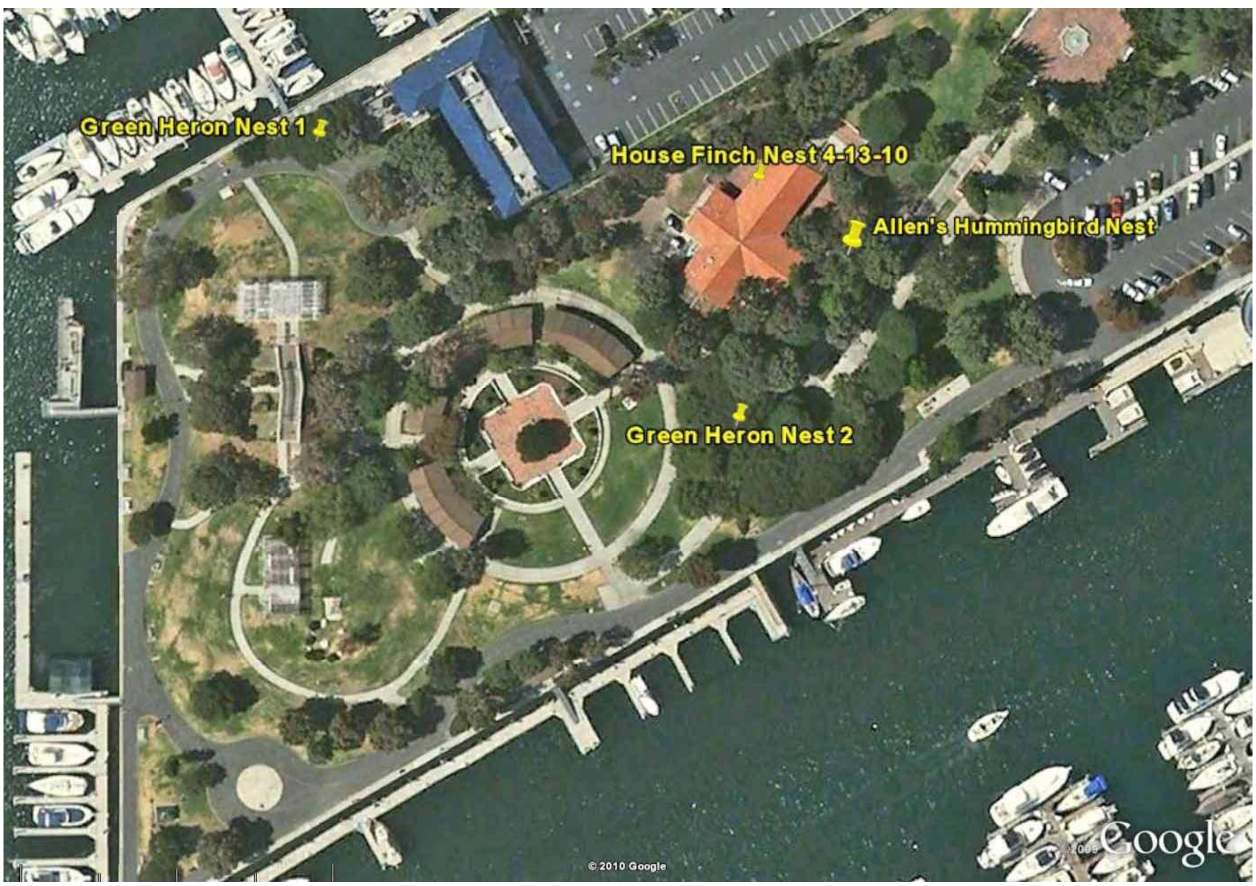


Figure 6. Locations of nests of species other than BCNH and American Crow observed at Burton Chace Park

American Crows were common and conspicuous throughout the park, and several pairs were seen engaging in courtship or nest-building behaviors. I did not monitor crow nests, however, since this species is recognized as being urban-adapted and is not prone to being disturbed by human activities.

The nest of Allen's Hummingbird (*Selasphorus sasin*) was being incubated by a female from March 10–12, but was empty as of Monday morning, March 15. Since no project activities had occurred over the intevening weekend, this nest failure did not appear to be related to the repair project.

I observed a pair of House Finches (*Carpodacus mexicanus*) building a nest on the side of the park administration building on April 13. This nest was never completed, however. The House Finch is highly adapted to living with humans and would not have been affected by project activities.

Two pairs of Green Herons were found nesting in the park during April and. Nest 1 fledged at least two or three young during May (see Figure 7, below). Nest 2 was built in the grove of trees that had hosted the failed BCNH colony and the nest-predating Raccoon, and that pair of Green Herons did not appear to get much past the nest-building stage.

Figure 7. Three Green Heron chicks at "Nest 1" in an Aleppo Pine on May 8. Two large young were seen here on May 15, and it is suspected that the third had already fledged by

Discussion & Conclusion

The results of monitoring indicated that birds nesting at Burton Chace Park are well-adapted to the human activities and noises endemic to this location, but they may also be quite vulnerable to urban-adapted predators such as American Crows and especially Raccoons. The baseline human impacts include exercise classes that involve groups of people running beneath the nesting trees, walking of dogs beneath nesting trees, park maintenance activities that include hosing down the walkways beneath nesting trees using a high-powered nozzle, the operation of two boat yards across the marina to the east, racing boats motoring past the park, sportfishing boats equipped with loudspeakers, occasional concerts, and jets flying over from nearby Los Angeles International Airport. Over numerous days of close monitoring, we did not observe any overt reactions of BCNH to any of these routine human activities, which occurred as close as 20–25 feet below heron nests.

The only project-related noises that were substantially louder than what is normally encountered at Chace Park occurred on the afternoon of March 22, when a concrete walkway was broken up as close as 40 feet from an active BCNH nest. This activity yielded noise readings in the range of 85–95 dBA Lmax for a period of 37 minutes, with a few spikes over 100 dBA. Even at these levels, the herons appeared to tolerate the work activity with only minor indications of disturbance. Had the attending adult BCNH at Nest 8 jumped off of the nest or otherwise exhibit marked "startle" behaviors, work would have been halted immediately in order to avoid potential predation of the nest by crows. This did not occur, and so work was allowed to proceed. Nest 8 was predated some time later that day, or early on the morning of March 23, following the predation of 11 other BCNH nests that had been active in this colony during the previous two weeks. During this period, I documented that a Raccoon was moving among the herons' nests, and even sleeping in them, and also that the herons would not attack the Raccoon even when they returned to find the animal occupying their previously-active nest. American Crows are also abundant in the park, and may have been responsible for some of the predation. Other possible nest-predators, such as the Great Blue Heron (*Ardea herodias*), Black Rat (*Rattus rattus*), and Virginia Opossum (*Didelphis virginiana*), also occur in the local area.

Two years ago, biologists from the Chambers Group documented that dozens of herons and egrets nesting at nearby Yvonne Burke Park and at other sites along Admiralty Way "successfully breed in situations that regularly exceed 110 dB."[1] In recognition of the apparent adaptability of colonial waterbirds to human disturbance in Marina del Rey, the current draft of the Conservation and Management Plan for Marina del Rey (prepared by Hamilton Biological in conjunction with Cooper Ecological Monitoring) contains the following recommendations for construction work near potential heron or raptor nesting sites:

> Typically, the project biologist should conduct an initial reconnaissance survey to determine whether any active waterbird or raptor nesting sites exist within 300 feet of proposed construction activities. The survey should include inspection of the ground for the guano stains typically present below waterbird nesting sites, but also careful inspections of all trees where nests might be placed.
>
> If an active waterbird or raptor nest is found within 300 feet of construction, the following measures are recommended:

---

[1] Chambers Group. 2008. *Results of the Baseline Breeding Bird Nesting Survey and Noise Assessment for the Los Angeles County Department of Public Works Oxford Basin Low Flow Diversion Project Site in the City of Marina del Rey, Los Angeles County, California.* Letter report dated 29 July 2008 from Kris Alberts to Reyna Soriano, Los Angeles County Department of Public Wo

1. The project biologist should either possess noise-monitoring equipment or work in conjunction with a noise-monitoring consultant to measure noise levels at active nesting sites.

2. The project biologist/noise monitor should be present at all weekly construction meetings and during all activities with potential to generate noise over a threshold of 85 dB at any nest site. This includes such activities as hardscape demolition, pile-driving, and the use of chainsaws. The purpose of monitoring should be to ensure that nesting birds are not disturbed by construction related noise. Thus, the monitor should watch for any behaviors associated with noise disturbance, including flushing or other startle movements, changes in foraging or reproductive rituals, interrupted feeding of young, or nest abandonment. If any such behaviors are observed, the monitor should have the authority to stop work immediately so that measures may be taken to avoid any further disturbance.

3. As a guideline, noise levels from construction, measured at the nest, should not exceed 85 dB. Monitoring should be especially careful and intensive, and observations should be recorded in detail, when noise levels approach this level. Nevertheless, given that levels in excess of 100 dB have been recorded at heron and egret nests near Oxford Basin with no apparent adverse effects (Chambers Group 2008), there is no empirical evidence proving that 85 dB is a valid threshold above which birds nesting in an urban environment experience substantial disturbance. Still, the burden of proof should be placed upon the project proponent to demonstrate that a higher noise level can be safely tolerated. If constant, detailed monitoring of noise levels above 85 dB demonstrates that the birds show no evidence of being disturbed, construction should be allowed to continue. In such cases, the final monitoring report should contain relevant details about (a) the types, intensities, and duration of noises the birds were subjected to, (b) any observations of stress behaviors in response to noises or other disturbances, and (c) the nesting success of those birds *relative to other birds in the nearby area that were not subjected to the same elevated levels of construction noise.* If it turns out that birds subjected to elevated noise levels appear to possibly experience reduced nesting success despite a general lack of evident stress behaviors, the project proponent should not be subject to any penalties, but the monitoring results should be incorporated into a revised construction monitoring policy that takes these important results into account. Without detailed monitoring of this nature, we will never know the actual thresholds at which different nesting bird species experience substantial disturbance at urban locations such as Marina del Rey.

4. If stress behaviors are observed from nesting birds in response to any construction activity, the project biologist should be authorized to call for the implementation of such mitigation measures as sound shields, blankets around smaller equipment, mixing concrete batches off-site, use of mufflers, and minimizing or eliminating the use of back-up alarms. If these sound mitigation measures do not reduce noise levels enough to eliminate the observed stress behaviors, construction within 300 feet of the nesting trees shall cease and shall not recommence until either new sound mitigation can be employed or until nesting is complete. To the extent possible, the biologist's monitoring report should specify the sound levels at the nest at which the birds demonstrated stress behaviors.

5. Construction staging areas or equipment should not be located under any nesting trees.

6. Construction employees should be prohibited from bringing pets (e.g., dogs and

7. Any lights used during construction should be shielded downward.

8. Although these recommendations refer specifically to waterbirds and raptors (because they tend to be most sensitive to disturbance), virtually all native birds are legally protected from disturbance while actively nesting. Therefore, the biological monitor should take all necessary steps to ensure that no native bird species are disturbed by construction activities.

These draft recommendations were generally followed in the case of the Chace Park repair project, and this project provided additional evidence that herons can tolerate noise levels exceeding 85 dBA, at least later in the nesting season, when the birds have already invested considerable time and resources into the nesting effort (disturbances earlier in the season, before eggs are laid, could produce different results). Given that the BCNH colony failed due to predation apparently unrelated to the repair project, however, the findings concerning the effects of loud noises on this colony were less definitive than could be hoped for. These recommendations are subject to change before the draft Conservation and Management Plan is finalized later this year, but I believe that the observations made at Chace Park during the repair project attest to the appropriateness of this general approach. As noted in (3) above, additional monitoring of projects like this will provide a body of credible information upon which to base future decisions about how best to proceed when construction projects have the potential to affect nesting colonies in Marina del Rey and elsewhere.

One recommendation that will be added to the draft Conservation and Management Plan (at the request of the County Department of Regional Planning) is to improve the handling of trash at Chace Park and elsewhere in Marina del Rey. Early in the morning on some days, I observed gulls and crows feeding on trash that they obtained from open trash cans. On one occasion the can was on its side (perhaps the work of a Raccoon) and gulls had ripped open the trash bag to access the contents. Such encouragement of scavengers has considerable potential for adverse effects upon nesting birds. Thus the provision of secure, covered trash containers may represent a worthwhile conservation measure for nesting bird populations in Marina del Rey.

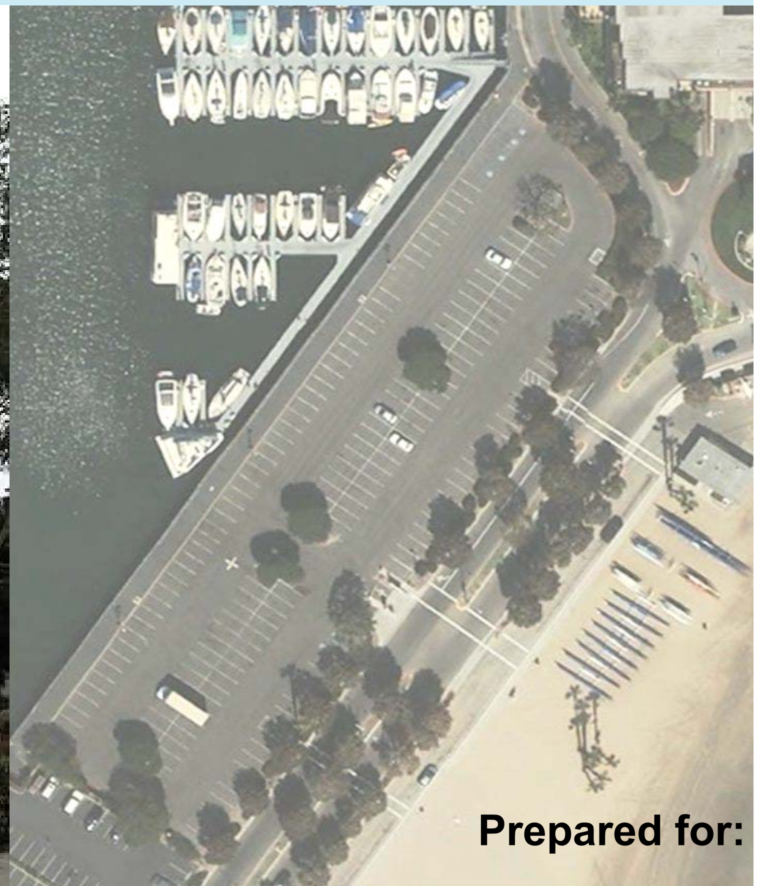
If you wish to review any matters, please call me at (562) 477-2181 or send e-mail to robb@hamiltonbiological.com.

Sincerely,

Robert A Hamilton

Robert A. Hamilton
President, Hamilton Biological, Inc.
http://hamiltonbiological.com

FINAL DRAFT
RIGHT-SIZING PARKING STUDY
FOR THE
PUBLIC PARKING LOTS IN
MARINA DEL REY, CALIFORNIA



Prepared for:

Los Angeles County Department of Beaches & Harbors

Los Angeles County Department of Regional Planning

June 2010

Submitted by :

RAJU Associates Inc

FINAL DRAFT
RIGHT-SIZING PARKING STUDY
FOR THE
PUBLIC PARKING LOTS IN MARINA DEL REY, CALIFORNIA

June, 2010

Prepared for:

THE LOS ANGELES COUNTY DEPARTMENT OF REGIONAL PLANNING
THE LOS ANGELES COUNTY DEPARTMENT OF BEACHES & HARBORS

Prepared by:

RAJU ASSOCIATES, INC.
524 S. Rosemead Boulevard
Pasadena, California 91107
(626) 796-6796

Ref: RA 247

EXECUTIVE SUMMARY

A comprehensive and detailed parking study has been performed by Raju Associates, Inc. to assess public parking needs within the Marina del Rey area of the County of Los Angeles, California, particularly in reference to the County's "pipeline projects" which require LCP amendments that will be aggregated into a single amendment. The aggregate approach was endorsed by both the Board of Supervisors and the Coastal Commission and its staff. Both current and future needs are assessed through the year 2030 and right-sizing of public parking within various areas in Marina del Rey have been addressed as part of this study, with a focus on the parking lots displaced by the pipeline projects.

Any study needs to begin with a definition of terms. For the purposes of this study, "Public Parking" is defined as the parking provided for the benefit of the general public (including visitors to and residents of Marina del Rey) for the sole purpose of utilizing and enjoying public facilities such as the beach, parks, recreational public uses and other specific attractions that are not commercial in nature. Expansions of these amenities contemplated by the County are taken into consideration in this document. The parking requirements associated with potential future attractions such as hotels, restaurants, marinas and other commercial establishments as well as all other private uses including residential, office, retail and other commercial types of uses are addressed separately using the Los Angeles County Parking Codes and Local Coastal Plan provisions, and as such, are not the subject of this study document. Only the requirements as they pertain to public parking as defined above are addressed in this document.

There are numerous public parking lots within the Marina del Rey area. They serve nearby residents as well as visitors to the Marina facilities. The public parking lots are all surface lots adjacent to specific attractions and serving a specific activity area. Past surveys and observations of utilization of these public parking lots have revealed that these lots are all greatly under-utilized to varying degrees almost throughout the year except for a few holidays and pre-holiday weekend days, even when the gate arms are up and no fee is charged.

A list of the public parking lots within the Marina that are evaluated in this study is provided below.

Lot Number	Parcel	Number of Parking Spaces	Remarks
1	W	502	Fisherman's Village and others use this lot
2	49R	239	
4	49M	140	
5	UR	220	Public Library uses 20 spaces
7	Q	120	
8	OT	183	FantaSea Yachts uses 94 spaces after 6 P.M.
9	NR	186	
10	IR	212	
11	GR	262	Cheesecake Factory uses this lot
12	FF	201	Not used much by anyone
13	3S	140	
16	EE	58	Metered parking spaces
Dock 52	52	236	LACBH office and others use this lot
Total		2,699	

This study is directed at identifying the appropriate parking supply to satisfy the current and anticipated future parking demands within various activity areas and right-sizing the parking lots (listed above) serving these activity areas. The estimation of parking demands for the future year 2030 was done using current observed parking demands and factoring in the ambient growth due to population increases over the next 20 years as well as the growth anticipated from planned adjacent uses. Several new improvements contemplated for visitors at Mother's Beach and potential expansion of Chace Park were factored into demand figures in the estimation of the future (2030) public parking demands, and consequently, the right-sizing of public parking supply within Marina del Rey.

There are six pipeline development projects proposed within the Marina at parcels 10/FF, IR, OT/21, 33/NR, 52/GG and 49/77. The uses that are proposed include residential, commercial retail, active seniors accommodations, hotel rooms, restaurants, visitor-serving commercial, office and dry-stack spaces. These uses will not directly cause an increase in public parking demand. Although there would be no direct effect on public parking due to these projects, the potential induced public parking demand has been accounted for in the ambient growth calculations noted above. These private development projects would be required to provide their own parking for the various proposed uses per Los Angeles County parking code requirements that are separate from the public parking assessments that are being addressed in this study.

Current and future parking demand and supply utilization analyses at each of the public parking lots within the Marina del Rey area were conducted in this study. Five major activity areas were identified and peak parking within these activity areas were determined. The supply needed to accommodate the current and future needs within each of the activity areas were also determined in this study and suggestions □recommendations for the same were made. The following executive summary highlighting the key findings of this study is presented on the following page.

- A total of 13 public parking lots and five activity areas were assessed within the study area for this project. The five activity areas are the Mother□s Beach Activity area, Yvonne B. Burke Park Activity area, Chace Park Activity area, Fiji Way Activity area and the North Channel Activity area.

- Parking supply surveys were conducted at each of the public parking lots within the study area by Los Angeles County Department of Beaches and Harbors staff and verified by Raju Associates in 2008 and 2009. Based on the field inventory surveys, it was determined that the total public parking available within the studied Marina del Rey area was 2,699 spaces. This is different from the number of spaces noted in the Marina del Rey Land Use Plan (LUP) due to restriping of various lots after publication of the LUP to accommodate handicapped spaces and to improve efficiencies.

- Parking demand surveys at each of the public parking lots were conducted during the busiest weekends (Friday through Monday) of the years 2005 and 2007. Memorial Day, 4^{th} of July and Labor Day weekends including the holidays were chosen to conduct the parking demand surveys. Parking demand surveys on boat parade days were also conducted. Raju Associates also conducted demand surveys at each of the parking lots during the recent Labor Day weekend in September 2009 and included the same in the evaluation of public parking requirements in this study. Additionally, a typical weekday and weekend day were chosen to conduct parking demand surveys to reflect typical conditions prevailing in the Marina for most of the year as it relates to parking.

- In addition to the demand surveys noted above, specialized surveys were conducted on a weekday and weekend day at all the parking lots where sharing of public parking spaces for private commercial uses are currently occurring. These were later utilized in determining the public parking demand component of the overall parking demand at these lots (as noted in the table above).

- The current peak public parking demand occupancies on typical weekdays and weekend days varies between 5% at Fiji Way activity area to 18% at Chace Park activity area during weekdays and 11% at Fiji Way activity area to 31% at Chace Park activity area during weekends. All other activity areas have parking occupancies of less than 18% and 31% on typical weekdays and weekend days, respectively. These occupancies are typical for most of the year (i.e., more than 300 days in a year).

- The current peak parking demand occupancies on peak holiday weekdays and weekend days varies between 10% at Fiji Way activity area to 43% at Chace Park activity area during weekdays and 21% at Fiji Way activity area to 68% at Chace Park activity area during weekends. The Fiji Way activity area parking lots also accommodate parking demands associated with commercial and other uses adjacent to them. The public parking demand component only has been reflected in the numbers above. If the overall parking demand at the lots that serve the Fiji Way activity area (including the commercial and other uses demand) is examined, then a 67% occupancy during peak weekdays and 92% during peak holiday weekends are observed. All other activity areas other than the Fiji Way activity area have parking occupancies of less than 43% and 68% on peak holiday weekdays and weekend days, respectively.

- The future anticipated peak parking demands on typical and peak holiday weekdays and weekend days were developed using anticipated ambient growth in the region as well as growth in public parking demand anticipated due to provision of additional public facilities within the Marina. The public parking demand associated with both the Chace Park expansion, as well as additional improved public amenities within the Mother's Beach activity area were included in the estimation of future anticipated public parking demand.

- At the public parking lots where parking is currently shared with other commercial uses, peak public parking demand estimates were developed by isolating the public parking demand component from various lots (Lot W, Dock 52 lot on Parcel 52, and Lot GR), applying the growth factors due to ambient growth, and then factoring in the additional demand associated with additional public facilities planned in the future. The public parking demand estimates from these lots were combined together to obtain the respective activity area public parking demands.

- These future anticipated demands varied greatly between activity areas as well as during typical and peak holiday weekdays and weekend days. Due to this wide variation in anticipated demands for each of the activity areas on weekdays and weekend days throughout the year, developing a measure of central tendency (such as mean or mode or median) was not meaningful. Instead, the 85th percentile and 90th percentile of the peak parking demands which are meaningful, in this context, were determined.

- The 90th percentile peak public parking demand at each of the activity areas represents that value of demand that 90% of all the peak public parking demands are less than or equal to. In technical terms, 90th percentile is that position in a dataset that has 90% of the data equal to or less than it and 10% of the data greater than it. The 90th percentile value states that at least 90% of the values in the set are less than or equal to this value.

- The 90th percentile of peak public parking demand at each of the activity areas was determined to be the following - Mother□s Beach: 360 spaces; Yvonne B. Burke Park: 102 spaces; Chace Park: 336 spaces; Fiji Way: 165 spaces; and North Channel: 100 spaces.

- The minimum public parking supply at each of the activity areas was determined using the 90th percentile future (2030) peak public parking demand and increasing the same by 10□ to facilitate satisfactory operations within each of the parking lots serving the individual activity areas. The increased 10□ supply over the peak demand by activity area would allow patrons to find parking spaces in the various parking lots serving the activity lot without having to move around or circle around between and within parking lots. The recommended number of required public parking spaces by activity area is shown below.

	Activity Area	**90th-Percentile Public Parking Demand (number of spaces)**	**Recommended Minim^{um} Number of Required Public Parking Spaces**	**Existing Parking Supply**	**Currently Proposed Potential Future Parking Supply**
A	Mother□s Beach	360	400	843 (1)	652
B	Yvonne B. Burke Park	102	115	340	342
C	Chace Park	336	370	437	684
D	Fiji Way	165 (2)	180 (2)	738 (1)	1012 (1)
E	North Channel	100	110	140	138

Note: (1) □Also used by private commercial uses
(2) □Number represents public parking component only

- Although these parking supply requirements have been recommended by activity area, it should be emphasized that one could park in any activity area within the Marina and use the Water Taxi or the Shuttle to reach the final destination.

- An evaluation of currently proposed potential public parking supply within each of the activity areas in comparison to the recommended range of minimum parking requirements was made. It was determined that more than adequate public parking supply would continue to be available within each of the activity areas. Included in the evaluation was also the overall future demand of both public and private parking demand versus proposed supply within each of the activity areas. It was determined that adequate overall parking supply would be available within each of the activity areas including even those that have commercial and other users sharing parking within the public parking lots.

- During peak holidays namely Independence Day, Labor Day, and Memorial Day and special event days such as Halibut Derby Day and Boat Parade Day, the parking within the Marina would need to be managed. A specific parking management plan should be developed to accommodate the peak holiday demands and shuttle people to their various specific destinations, where needed.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

APPENDICES

I. INTRODUCTION

Raju Associates Inc was retained by the Los Angeles County Department of Beaches & Harbors to conduct a parking study to identify and assess the parking needs at all the public parking lots within the Marina del Rey area. This report documents the assumptions, methodologies and findings of this study conducted to evaluate and assess right-sizing the public parking lots. The study area for this evaluation is located entirely within Marina del Rey in the County of Los Angeles, California.

BACKGROUND

Past parking surveys at the various public parking lots within the Marina del Rey area indicate that these lots are under-utilized. The purpose of this comprehensive parking study is to right-size all the public parking lots in Marina del Rey, so that the number of parking spaces in these lots meets the long-term build out public parking demands for the year 2030. "Public Parking" is defined as the parking provided for the benefit of the general public (including visitors to and residents of Marina del Rey) for the sole purpose of utilizing and enjoying the public facilities such as the beaches, parks, recreational public uses and other specific attractions that are not commercial in nature and all contemplated expansions thereto.

Based on the results of this study, a recommendation relative to public parking will be advanced to the California Coastal Commission. This study addresses the parking needs of each of the activity areas in the Marina taking into account current utilization, future ambient growth in demand as well as the growth projected to occur within these activity areas that would have an effect on public parking demand.

Figure 1 illustrates the location of the various public parking lots within the Marina del Rey area in relation to the surrounding street system.

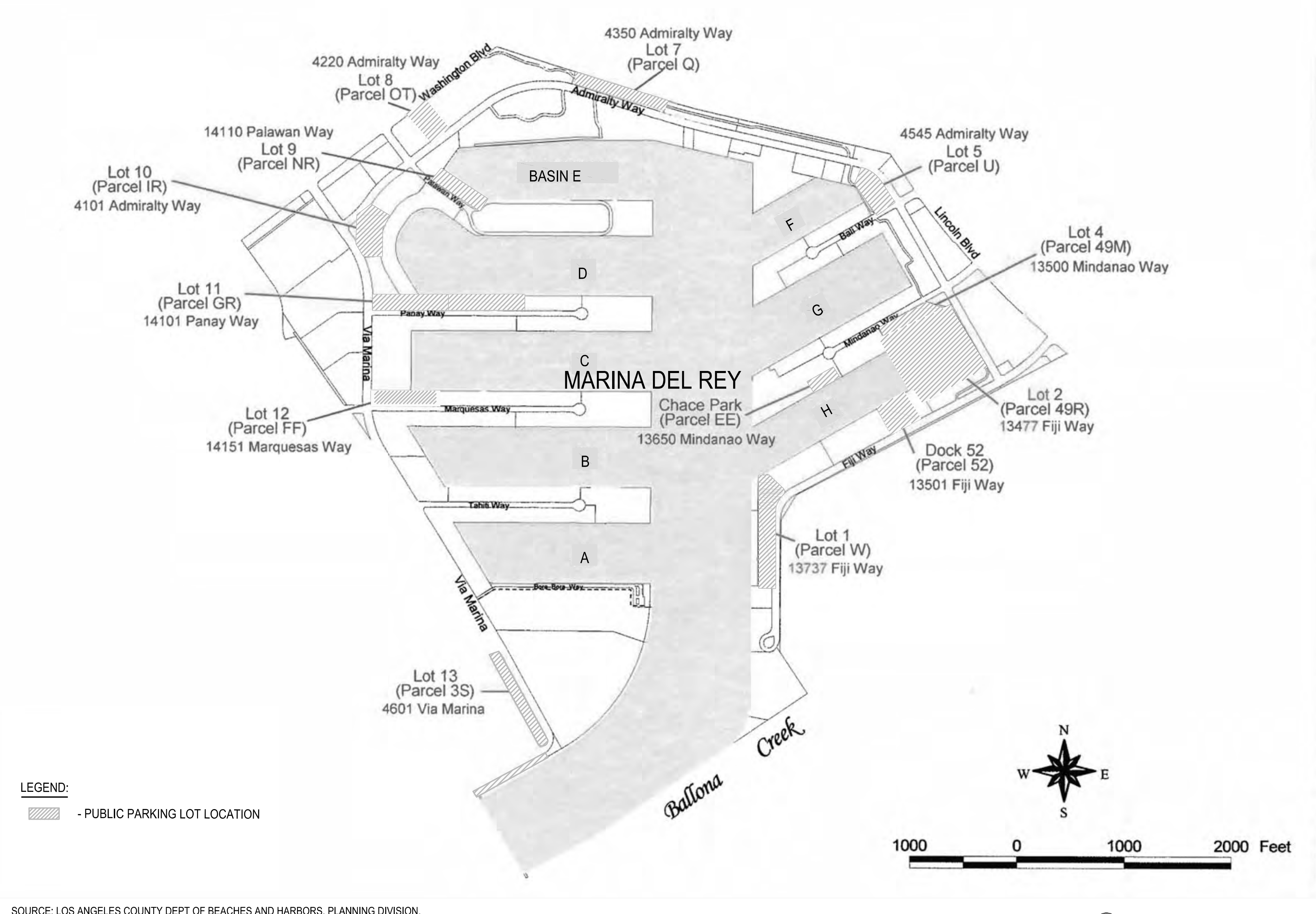


FIGURE 1
LOCATION OF PUBLIC PARKING LOTS IN MARINA DEL REY

RAJU Associates, Inc.

The public parking within the Marina del Rey area has been evaluated within each of the activity areas as a whole, in this study due to the following reasons:

- The current dynamics associated with public parking in Marina del Rey indicate a very close relationship between the current uses within each of the specific activity areas and the public parking supply serving those areas
- The anticipated nature of interaction between the various existing and future proposed uses within each of the activity areas in Marina del Rey dictate the need to evaluate public parking as a whole for each of the activity areas

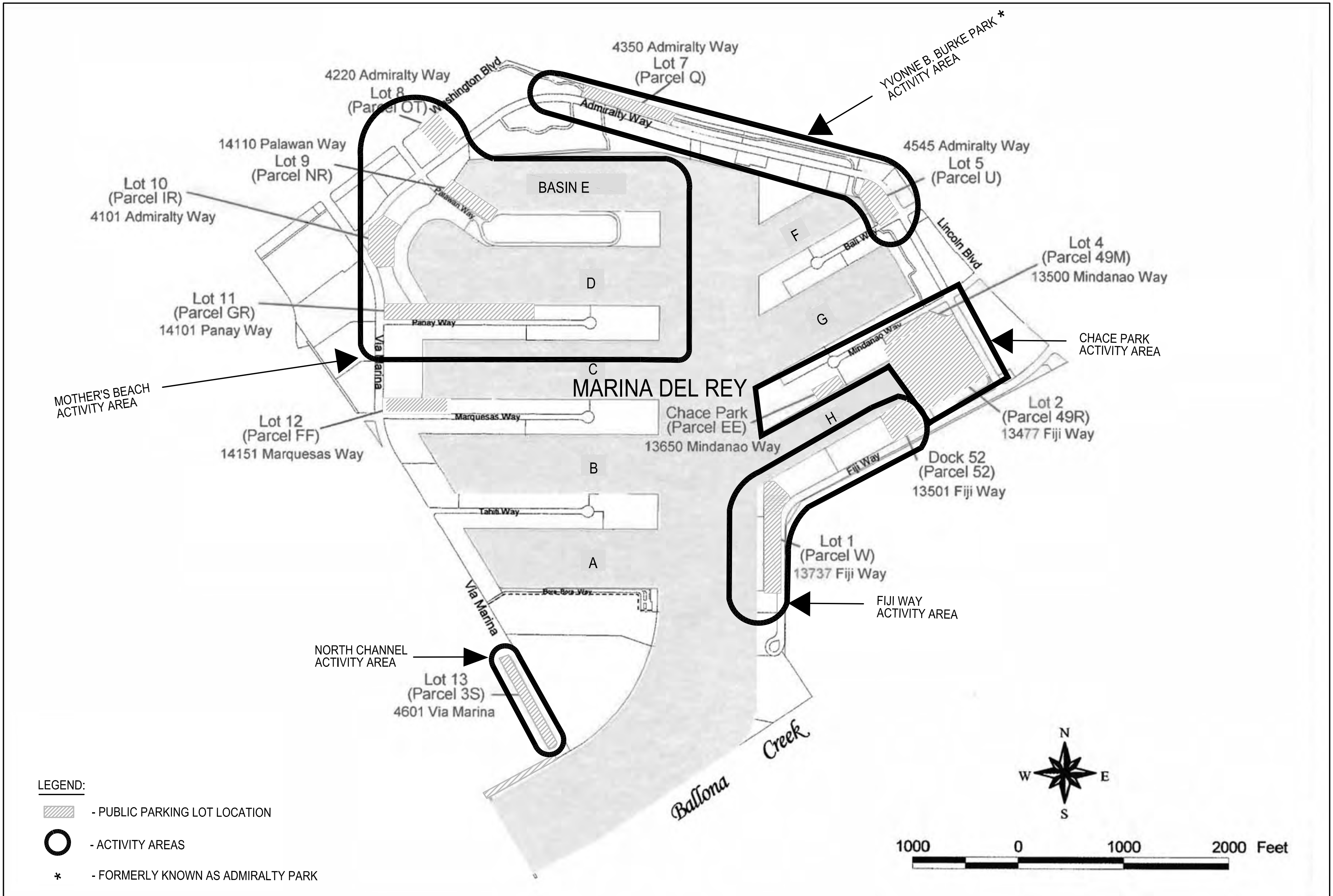
Currently, five activity areas have been defined within the Marina del Rey area. They include the following:

A. Mother's Beach Activity Area
B. Yvonne B. Burke Park (formerly known as Admiralty Park) Activity Area
C. Chace Park Activity Area
D. Fiji Way Activity Area
E. North Channel Activity Area

Figure 2 shows the various activity areas and the parking lots serving each of them. The parking analyses and evaluation to identify the public parking needs and right-size parking have been conducted at the five activity areas noted above.

ORGANIZATION OF REPORT

An executive summary presenting key details of the study is provided at the beginning of this report. The rest of the report is divided into five chapters. Chapter I presents an introduction and provides details of the various elements of the study. Chapter II documents the existing parking supply and inventory at each of the public parking lots serving the public parking demands within each of the activity areas in the Marina. Parking characteristics by time of day during peak holiday weekdays and weekend days, holidays, as well as typical weekdays and weekend days, including their current occupancy rates and maximum observed demands by activity area are



SOURCE: LOS ANGELES COUNTY DEPT OF BEACHES AND HARBORS. PLANNING DIVISION.

RAJU Associates, Inc.

FIGURE 2
DEFINITION OF ACTIVITY AREAS WITHIN MARINA DEL REY

described in Chapter II. Chapter III provides a description of the anticipated parking demand by activity area taking into account the growth expected to occur due to additional attractions or uses as well as ambient growth in population. A detailed evaluation of parking needs in the future is presented in this chapter.

Chapter IV addresses the identification of parking supply requirements by activity area to accommodate the public parking demands anticipated in the future within the Marina del Rey area. An assessment of proposed potential public parking supply currently contemplated within the Marina del Rey area as it relates to its adequacy and convenience is also presented in this chapter.

A summary of conclusions from the study is provided in Chapter V of the Report. Technical appendices including details of the parking analysis as well as the references and people contacted during the study are also attached to this report.

II. EXISTING PARKING CONDITIONS

This chapter describes the existing parking supply and demand, both at the individual lots as well as within each activity area. A description of the existing utilization patterns in terms of occupancy of the parking supply for both typical and peak holiday weekday and weekend days is provided in this chapter. The performance of the parking lots within each of the activity areas is summarized in this chapter.

EXISTING PARKING SUPPLY

The project study area obtains its public parking supply from various surface parking lots located within the Marina del Rey area of the unincorporated area of Los Angeles County. An inventory of the available parking spaces within each of the thirteen surface lots in each of the activity areas was compiled from data provided by the Los Angeles County Department of Beaches and Harbors (LACDBH) and collected and verified using field surveys conducted by Raju Associates, Inc. A comparative table showing the parking supply by lot from LACDBH data, Raju Associates field surveys and Marina del Rey LUP and the potential reason for differences between the various sources is included in Appendix A1.

Figure 3 presents details of the available parking supply within each of the public parking lots serving the study area. From Figure 3, it can be observed that the following lots provide the parking supply within each of the activity areas:

Mother's Beach Activity Area: Parking lot 8 on Parcel OT, lot 9 on Parcel NR, lot 10 on Parcel IR and lot 11 on Parcel GR serve this activity area. The total available parking supply in this activity area from the parking lots listed above is currently 843 spaces. This activity area includes the Mother's Beach (also known as Marina Beach), adjacent restaurants and boat storage slips

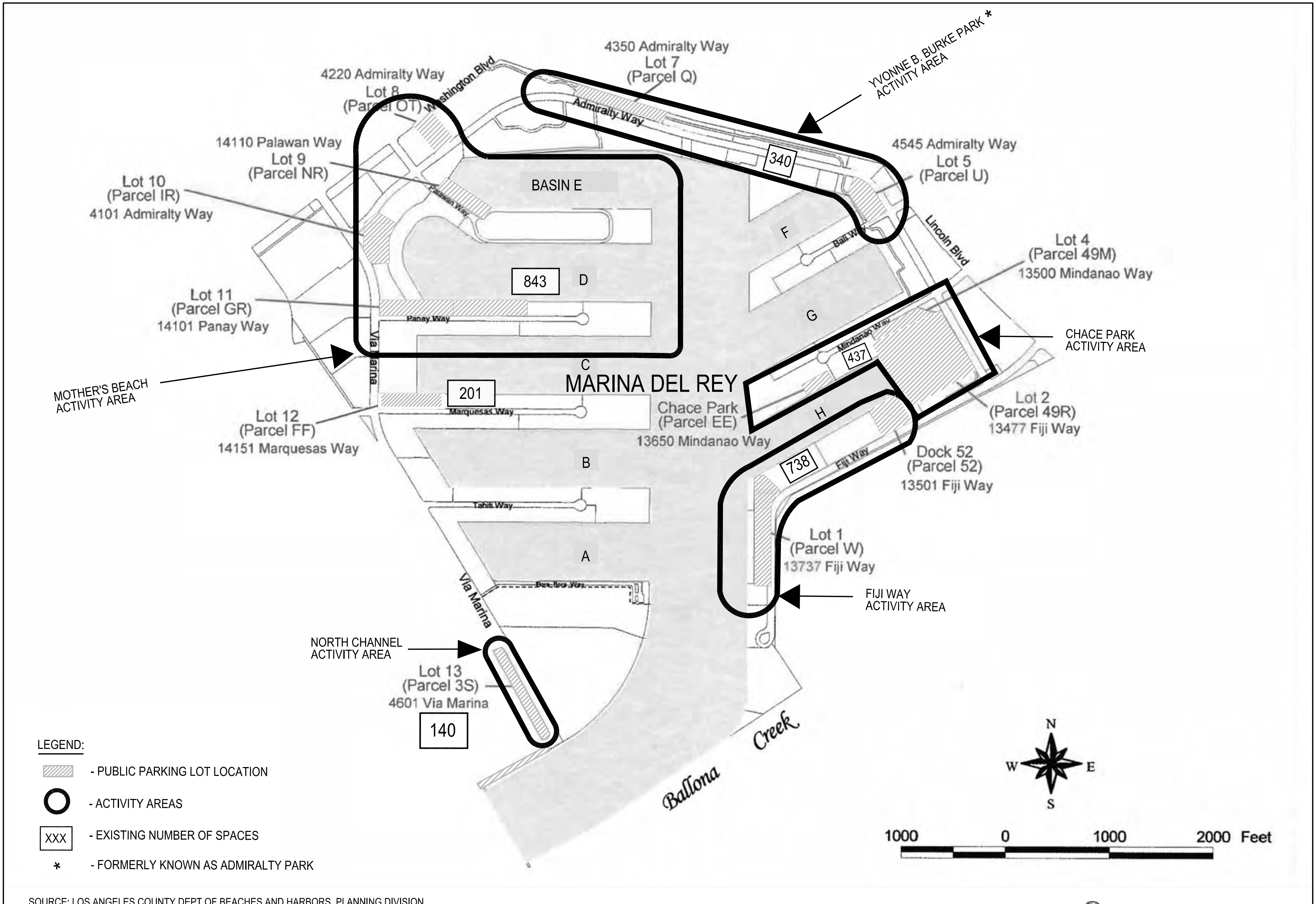


FIGURE 3
EXISTING PARKING SUPPLY BY ACTIVITY AREA

RAJU Associates, Inc.

accessible from this area. There is a new plan for Marina Beach that anticipates additional boat storage in the future. This issue is addressed in the assessment of parking conditions in the future at the Mother's Beach Activity Area. Parking lot GR is also utilized by the restaurant The Cheesecake Factory.

Additionally, some of the kayaking and other public patrons at the marina currently utilize the parking at the Organic Panificio (Parcel 33) parking lot, a private but unsecured leasehold, and prior to its recent construction occasionally used the Casa Escobar (Parcel 27) parking lot. I It is presumed that using the leasehold parking lots when the restaurants are closed is to avoid the County parking fee at Parcel NR and other public lots. These parking demands have also been addressed in this study.

Parking Lot 8 on Parcel OT is located at 4220 Admiralty Way, north of Admiralty and east of Palawan Way. Currently, there are 183 parking spaces on this overflow lot. Access to this lot is obtained from a driveway between Admiralty Way and Washington Boulevard. FantaSea Yachts uses up to 94 spaces after 6 PM.

Parking Lot 9 on Parcel NR is located at 14110 Palawan Way, south of Admiralty and east of Palawan Way. There are 186 parking spaces on this overflow lot. Access to this lot is obtained from Palawan Way. Some public patrons also park in the free parking lot available at the Parcel 33 lot adjacent to lot NR along Palawan Way. On weekdays, it was also observed that some of the public patrons parked at the Parcel 27 parking lot early in the morning, as well. The overall public parking demand including these elements were determined based on surveys conducted in this study.

Parking Lot 10 on Parcel IR is located at 4101 Admiralty Way, south of Admiralty Way and east of Via Marina. There are currently 212 parking spaces on this lot. This lot obtains access primarily off of Admiralty Way.

Parking Lot 11 on Parcel GR is located at 14101 Panay Way, located east of Via Marina and north of Panay Way. This overflow lot serves the Cheesecake Factory patrons as well as other visitors. The Cheesecake Factory restaurant is adjacent to this lot and although it has its own parking spaces within its lot, additional parking is allowed by valet within Lot 11. An internal driveway and gate provides connection between the Cheesecake Factory lot and Lot 11 and the valet services for the restaurant utilize this gate to access the parking in Lot 11. There are currently 262 spaces on this Lot 11. This lot obtains access from Via Marina as well as from Panay Way. Surveys were conducted at Lot 11 to determine the various components of the overall parking demand. Both Cheesecake Factory patrons and employees and the general public parking demands accessing the Mother's Beach area were determined as part of the surveys.

Yvonne B. Burke Park Activity Area: Parking lot 7 on Parcel Q and parking lot 5 on Parcel UR serve this activity area. The total available parking supply from these two lots within this activity area is 340 spaces. This activity area parking primarily serves local patrons, library and other visitors and bike path users. A brief description of the lots 7 and 5 follows.

Parking Lot 7 on Parcel Q is located at 4350 Admiralty Way, north of Admiralty Way and approximately mid-way between Bali Way and Palawan Way. There are currently 120 spaces on this lot. The Lloyd Tabor – Marina del Rey Library uses 20 spaces on Lot 7 by permit. This lot obtains access primarily from Admiralty Way.

Parking Lot 5 on Parcel UR is located at 4545 Admiralty Way, north of Bali Way and east of Admiralty Way. There are currently 220 spaces on this lot. This overflow lot obtains access from Bali Way.

Chace Park Activity Area: Parking lot 4 on Parcel 49M, lot 2 on Parcel 49R and lot 16 on Parcel EE provide public parking within this activity area. This activity area includes the Chace Park Recreation Area, boat slips, a Yacht Club (a public facility), the Aquatic Center and other uses. The total available parking supply within this activity area currently is 437 spaces. A brief description of each of the lots serving this activity area follows.

Parking Lot 4 on Parcel 49M is located at 13500 Mindanao Way, south of Mindanao Way and west of Admiralty Way. There are currently 140 spaces on this overflow lot. This lot obtains access from Mindanao Way.

Parking Lot 2 on Parcel 49R is located at 13477 Fiji Way, south of the parking lot 4 on Parcel

49M. There are currently 458/239 parking / boat trailer spaces on this lot. This lot obtains access from Fiji Way and provides a public boat launch ramp facility.

Parking lot 16 on Parcel EE is located at 13650 Mindanao Way, south of Mindanao Way and west of Admiralty Way. There are 58 metered parking spaces on this lot. This lot obtains access from Mindanao Way.

Fiji Way Activity Area: Parking lot 1 on Parcel W and Dock 52 on Parcel 52 provide public parking currently for this activity area. Overflow lots along Fiji Way (located on the south side of Fiji Way) provide parking for the employees of various government offices. During peak holiday weekdays and weekend days, these lots may be used by County permit for employees of Fisherman's Village. This activity area includes the Fisherman's Village, Restaurants, Offices, Docks and other uses. Lot 1 on Parcel W is the principal parking lot for the Fisherman's Village Commercial Development as well as Shanghai Reds Restaurant and the Charter Boat Companies. The total available parking supply within this activity area is currently 738 spaces. The Overflow lots provide an additional 252 spaces. A brief description of each of the lots serving this activity area follows.

Parking Lot 1 on Parcel W is located at 13737 Fiji Way, west of Fiji Way, in the Fisherman's Village area. There are currently 502 parking spaces on this lot including the spaces available in the surface parking lot on Parcel 55. This lot obtains access from Fiji Way. As stated earlier, this lot is used by Fisherman's Village commercial and restaurant uses predominantly and to a certain extent, by the general public for recreational uses. Detailed surveys were conducted at this lot by Raju Associates Inc to determine the magnitude of public parking within this lot.

Parking lot at Dock 52 on Parcel 52 is located at 13501 Fiji Way, north of Fiji Way, adjacent to the Dock 52 area and is characterized as a temporary parking lot in the LCP. There are currently 236 parking spaces on this lot. This lot obtains access from Fiji Way and provides parking to County offices, charter and fishing boat activities and the general public for recreational purposes. Public parking demand information from a parking study prepared for the Fisherman's Village Development was obtained and verified as part of this study.

The Overflow Lots along Fiji Way are owned by the State Department of Fish and Game. There are currently 252 spaces in these lots. These lots obtain access from Fiji Way. Parking demands at these lots have been included for informational purposes only and are not included in the determination of public parking supply requirements for the Fiji Way Activity Area since no public parking for recreational purposes are allowed in these lots.

North Shore Activity Area: The parking lot 13 on Parcel 3S provides most of the public parking spaces within this activity area. This activity area mostly serves local residents, fishermen, beachgoers and nearby house guests. The total available parking supply provided by the overflow lot 13 within this activity area is 140 spaces. Access to lot 13, located at 4601 Via Marina is obtained from Via Marina.

Parking lot 12 on Parcel FF, adjacent to Mother's Beach activity area, is also a public parking lot, per the Local Coastal Plan (LCP). There are 201 spaces in this lot. However, in the past few years, this overflow lot has not been used much by the general public for recreational purposes but has been used mostly for construction staging and by construction vehicles during construction. No public demand has been noticed in this lot. Therefore, no further analysis of this parking lot 12 is conducted in this study. This lot is planned to be removed from the list of public parking lots in the future pending a Plan Amendment is approved by the California Coastal Commission.

Summarizing, the overall parking supply within the five activity areas available to the general public is as follows:

	Activity Area	Number of Existing Parking Spaces
A	Mother's Beach	843
B	Yvonne B. Burke Park	340
C	Chace Park	437
D	Fiji Way (*)	738
E	North Shore	140

(*) – Fiji Way activity area includes lots 1 and Dock 52. The parking lot 1 is the primary lot for the Fisherman's Village, Shanghai Reds Restaurant and Charter Boat companies. Similarly, Dock 52 lot is used by County office employees, charter boat users and the general public. Therefore, both these lots are used mostly by private uses and although, public parking is allowed on lot 1, not all of the supply is utilized for public recreational purposes.

PARKING DEMAND OR UTILIZATION SURVEYS

Parking demand survey data was obtained from the Los Angeles County Department of Beaches and Harbors, Parking Section for peak holiday weekdays and weekend days including holidays. The following three holiday weekends were surveyed and information compiled for the years 2005 and 2007:

- Three days prior to and on the July 4^{th} Holiday
- Friday through Monday prior to and on the Memorial Day Holiday
- Friday through Monday prior to and on the Labor Day Holiday

Additionally, Raju Associates conducted parking demand surveys and compiled information at all the public parking lots during the Labor Day holiday long weekend in September 2009.

It has been observed that these weekends and weekdays prior to the holidays happen to exhibit the maximum utilization of public parking spaces in the Marina every year. Therefore, these peak weekends and weekdays were included in the study.

Additionally, parking demand or occupancy surveys at all public parking lots in Marina del Rey on a typical weekday and weekend day between the hours of 10 AM and 8 PM was conducted by Raju Associates' staff and information was compiled for analysis. The survey information included parking demand or occupancy numbers at each of the public lots in operation within each of the activity areas between the hours of 10 AM and 8 PM on each of the survey days.

Special surveys at parking lots W, GR and NR and adjoining lots were conducted by Raju Associates to ascertain the composition of all the users of each of these lots. The number of parking spaces occupied by public recreational users was measured on a typical weekday and weekend day and the peak public demand data was obtained using normalization techniques. Surveys and observations at the Casa Escobar (Parcel 27) parking lot, Organic Panificio (Parcel 33) parking lot, NR lot and the Cheesecake Factory and GR parking lots were conducted on a typical weekday and weekend day and the associated public parking demands were noted.

These demands were utilized in the determination of public parking requirements analysis in the study and included in the estimation of current and future public parking demands within the Mother's Beach activity area.

Therefore, in summary, parking demands throughout the day on weekdays and weekend days were compiled for analysis of the following conditions.

- Typical conditions
- Peak holiday conditions for the July 4th celebrations
- Peak Memorial Day holidays
- Peak Labor Day holidays

All of this parking demand data from surveys and the compiled information is attached in Appendix A2 of this report. Additionally, the data from special surveys noted earlier are also included in Appendix A3.

Typical Weekday & Weekend Day Parking Conditions

The public parking demands and occupancies for each of the activity areas for typical weekdays and weekend days are shown in Figures 4-1, 4-2, 5-1, and 5-2, respectively. Tables 1 and 2 summarize the peak overall and public parking demands and utilizations and the time of day that they occurred for typical weekdays and weekend days, respectively for each of the activity areas in the Marina. These typical parking demands are observed in the Marina for more than 300 days every year.

From Tables 1 and 2, the following observations can be made:

- In the Mother's Beach Activity Area, the maximum observed public parking occupancy was 13% and 12% during typical weekdays and weekend days, respectively. This demand did not include Cheesecake Factory restaurant parking in Lot GR in addition to the public recreational use parking demand. However, with the commercial use parking demands , the maximum observed parking occupancy within this activity area was 16% and 21% during typical weekdays and weekend days, respectively.

- In the Yvonne B. Burke Park Activity Area, the maximum observed parking occupancy was 9% and 29% during typical weekdays and weekend days, respectively.
- In the Chace Park Activity Area, the maximum observed parking occupancy was 18% and 31% during typical weekdays and weekend days, respectively.
- In the Fiji Way Activity Area, the maximum observed parking occupancy was 28% and 53% during typical weekdays and weekend days, respectively. This demand included Fisherman's Village and other uses parking in Lots W and Dock 52. However, the maximum observed typical weekday and weekend public parking occupancies were 5% and 11%, respectively.
- In the North Channel Activity Area, the maximum observed parking occupancy was 11% and 23% during typical weekdays and weekend days, respectively.

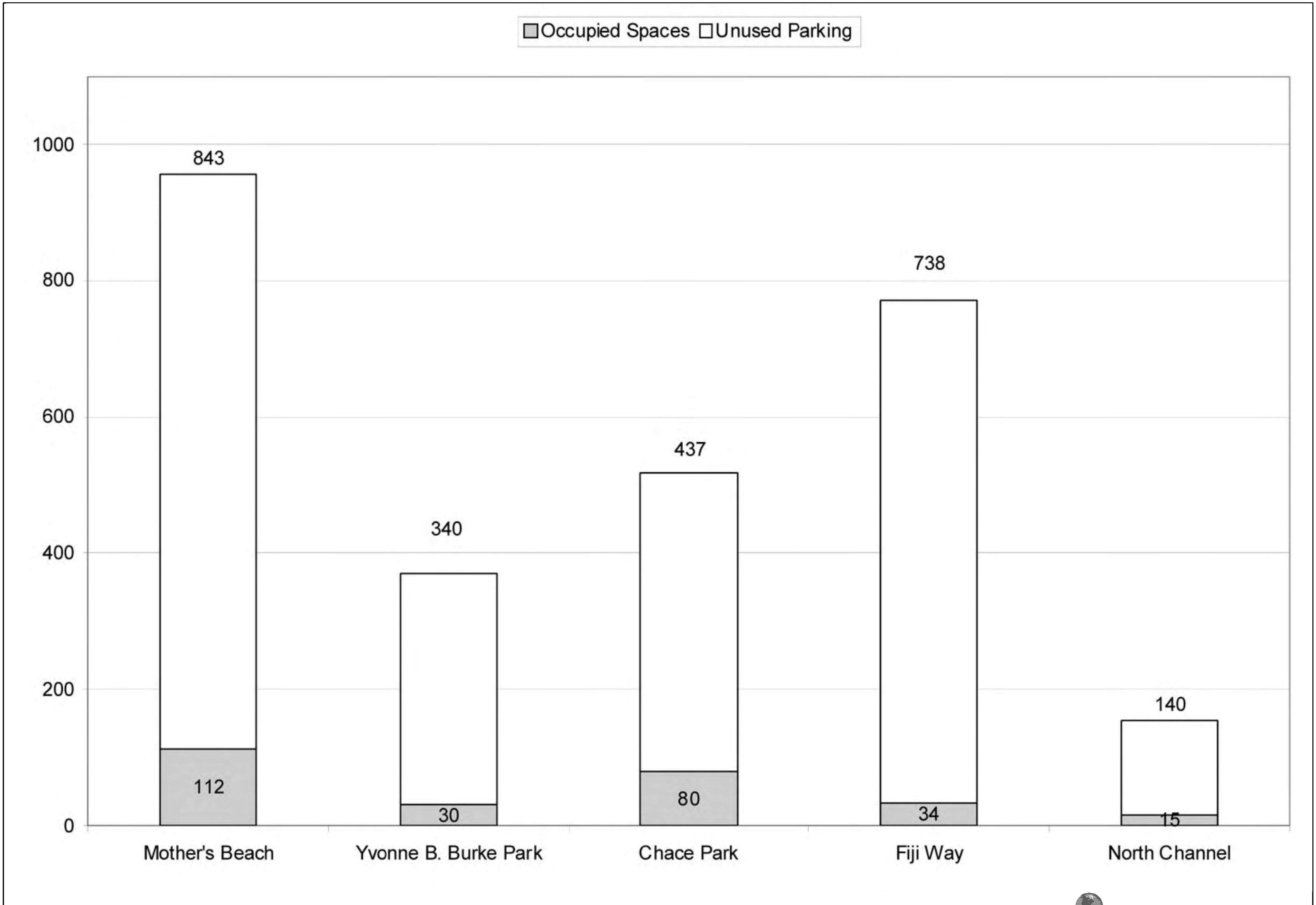


FIGURE 4-1
TYPICAL WEEKDAY EXISTING PARKING DEMAND BY ACTIVITY AREA

RAJU Associates, Inc.

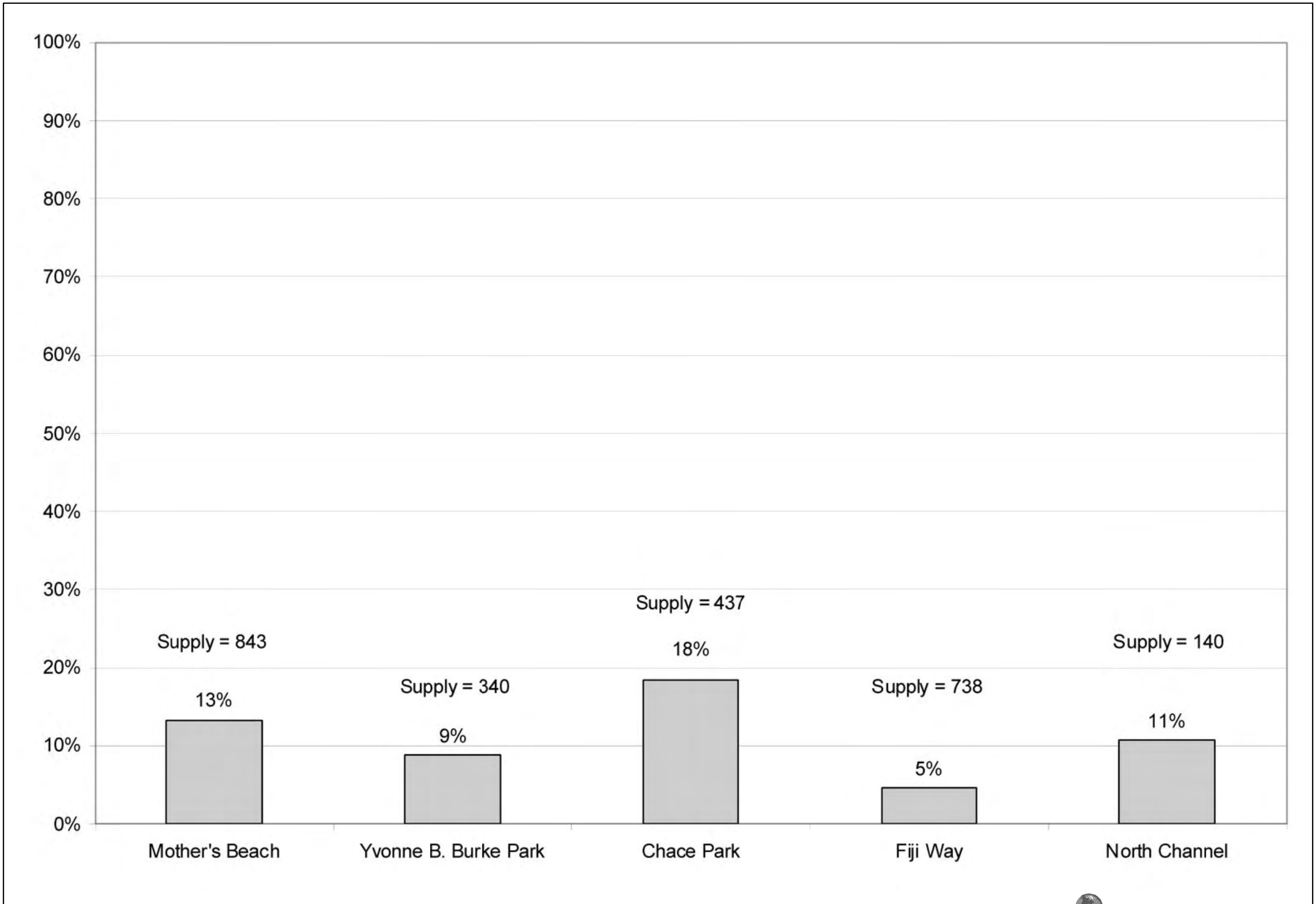


FIGURE 4-2
TYPICAL WEEKDAY EXISTING PARKING OCCUPANCY BY ACTIVITY AREA

RAJU Associates, Inc.

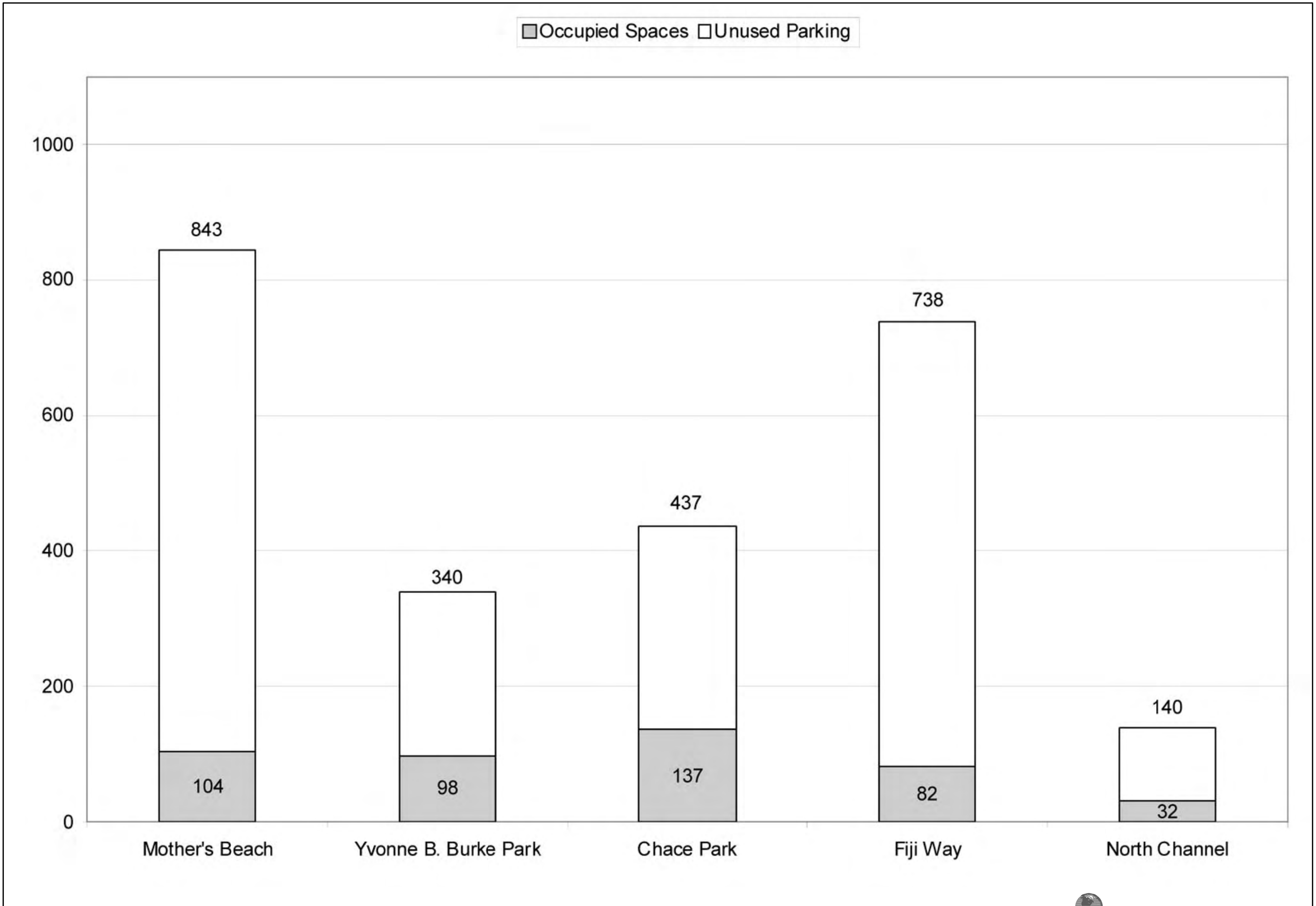


FIGURE 5-1
TYPICAL WEEKEND DAY EXISTING PARKING DEMAND BY ACTIVITY AREA

RAJU Associates, Inc.

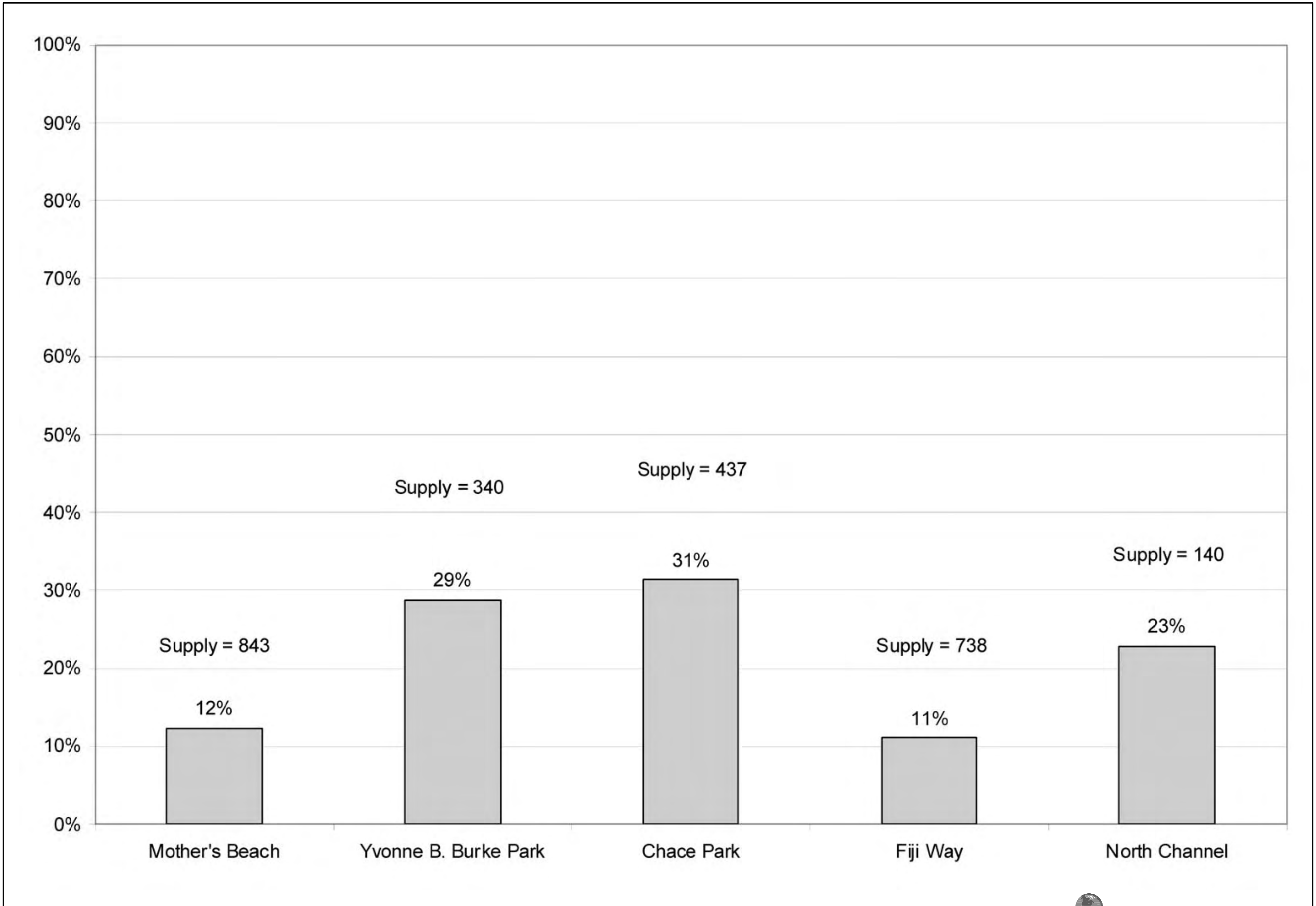


FIGURE 5-2
TYPICAL WEEKEND DAY EXISTING PARKING OCCUPANCY BY ACTIVITY AREA

RAJU Associates, Inc.

TABLE 1
TYPICAL WEEKDAY EXISTING PARKING DEMAND & OCCUPANCIES

#	Activity Area	Parking Supply	Typical Weekday Peak Demand	Typical Weekday Peak Occupancy	Time
1	Mother's Beach (8-OT, 9-NR, 10-IR, 11-GR)	843	Public: 112 All: 133	Public: 13% All: 16%	1PM
2	Yvonne B Burke Park (*) (5-U, 7-Q)	340	30	9%	4PM
3	Chace Park (2-49R, 4-49M, EE)	437	80	18%	1PM
4	Fiji Way (1-Fisherman's Village, Dock 52)	738	Public: 34 All: 206	Public: 5% All: 28%	4PM 8PM
5	North Channel (13-3S)	140	15	11%	8PM

Note: (*) - Formerly known as Admiralty Park

TABLE 2
TYPICAL WEEKEND DAY EXISTING PARKING DEMAND & OCCUPANCIES

#	Activity Area	Parking Supply	Typical Weekend Day Peak Demand	Typical Weekend Day Peak Occupancy	Time
1	Mother's Beach (8-OT, 9-NR, 10-IR, 11-GR)	843	Public: 104 All: 180	Public: 12% All: 21%	1PM 8PM
2	Yvonne B Burke Park (*) (5-U, 7-Q)	340	98	29%	4PM
3	Chace Park (2-49R, 4-49M, EE)	437	137	31%	4PM
4	Fiji Way (1-Fisherman's Village, Dock 52)	738	Public: 82 All: 391	Public: 11% All: 53%	1PM
5	North Channel (13-3S)	140	32	23%	8PM

Note: (*) - Formerly known as Admiralty Park

In summary, for most of the year (i.e., more than 300 days in any year), all the parking lots within each of the Activity Areas in Marina del Rey are very underutilized. The maximum public parking occupancy that was noted in the Chace Park activity area on a typical weekend day was 31% at peak times of the day. All other activity areas are currently showing maximum public parking occupancies of 5 to 18% during typical weekdays and 12 to 31% during weekend days indicating a large amount of unused excess parking for most of the time throughout the year.

Detailed demand analyses by day and lot, and by activity area are attached in Appendices B-1 and B-2 of the report.

Peak Holiday Weekday & Weekend Day Parking Conditions

The maximum parking demands and occupancies for each of the activity areas for peak holiday weekdays and weekend days (July 4th, Memorial Day and Labor Day Holidays were analyzed as noted earlier) are shown in Figures 6-1, 6-2, 7-1, and 7-2, respectively. Tables 3 and 4 summarize the peak overall and public parking demands and utilizations for key holiday weekdays and weekend days, respectively for each of the activity areas in the Marina. These key holidays parking demands are observed in the Marina mainly during the non-working weekdays and weekend days prior to the three major holidays, namely the 4th of July, Memorial Day and Labor Day every year. The actual holiday parking demands are not included in this assessment since it is recommended that a comprehensive parking management plan be implemented to meet the demands on these holidays, especially the 4th of July holiday. During the Boat Parade Day and Halibut Derby event days, only specific parking lots within the various activity areas are utilized by the participants and viewers, and as such, these are special event days when a parking management plan to manage and control parking in the Marina Del Rey area should be implemented.

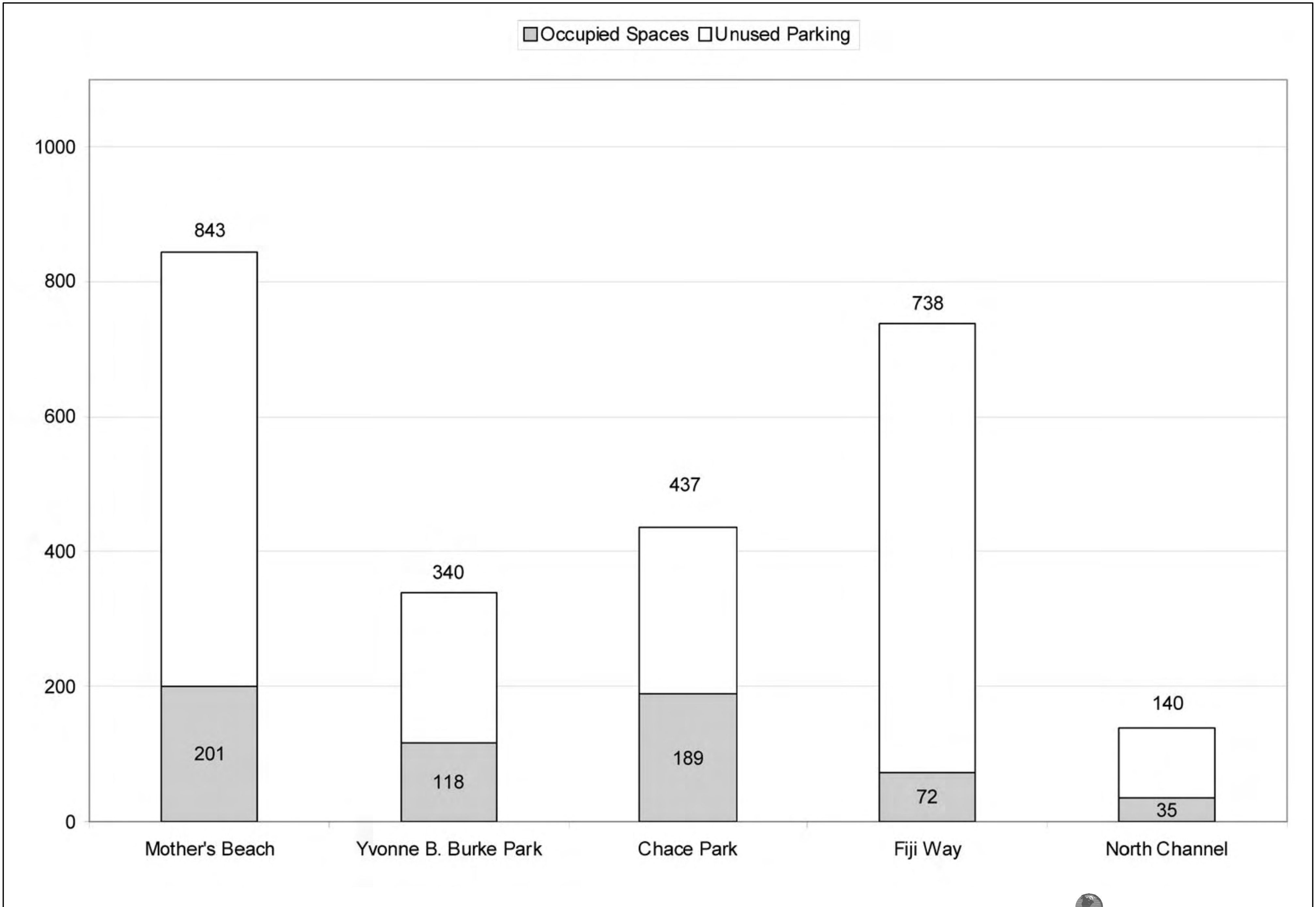


FIGURE 6-1
PEAK WEEKDAY EXISTING PARKING DEMAND BY ACTIVITY AREA

RAJU Associates, Inc.

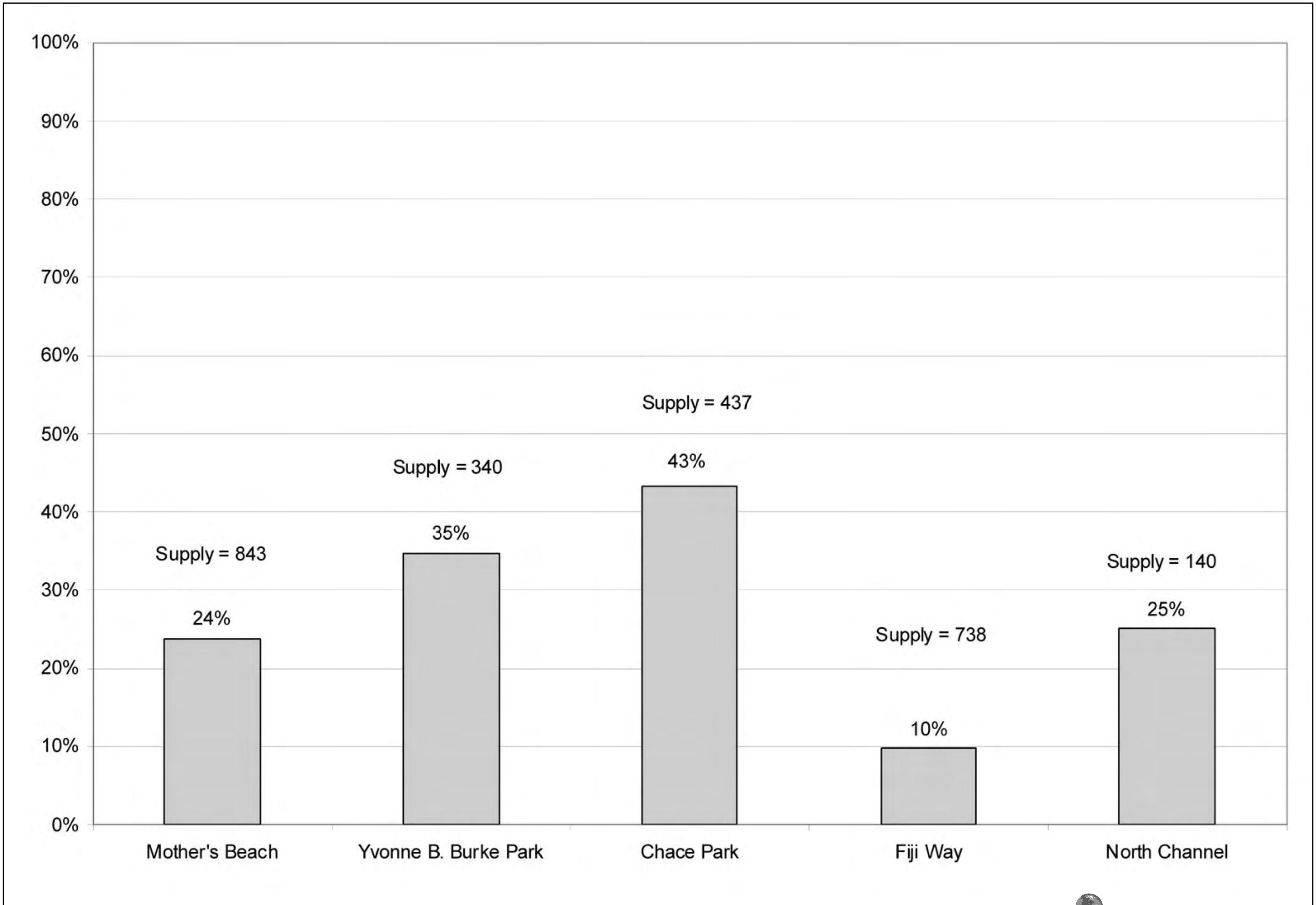


FIGURE 6-2
PEAK WEEKDAY EXISTING PARKING OCCUPANCY BY ACTIVITY AREA

RAJU Associates, Inc.

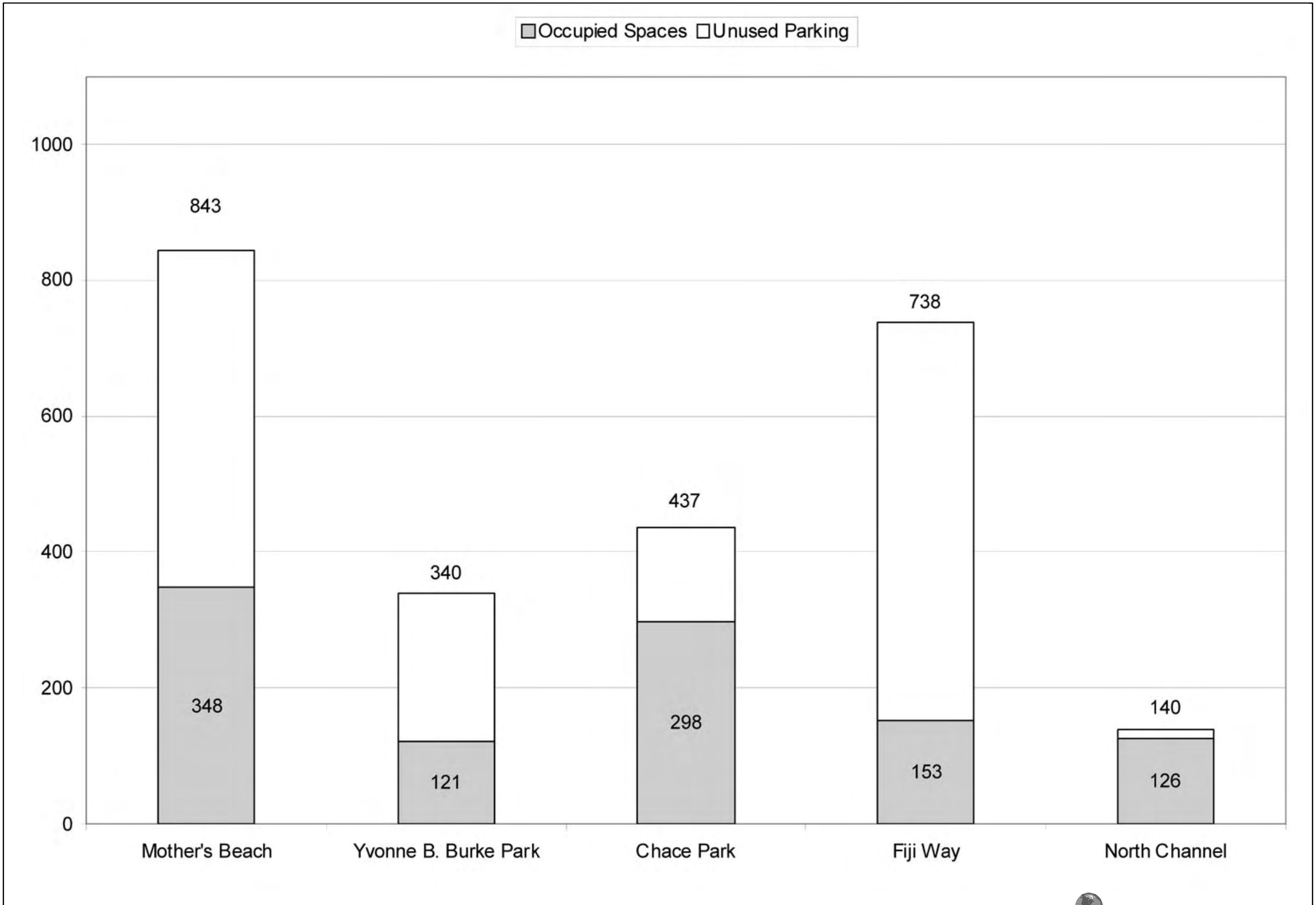


FIGURE 7-1
PEAK WEEKEND DAY EXISTING PARKING DEMAND BY ACTIVITY AREA

RAJU Associates, Inc.

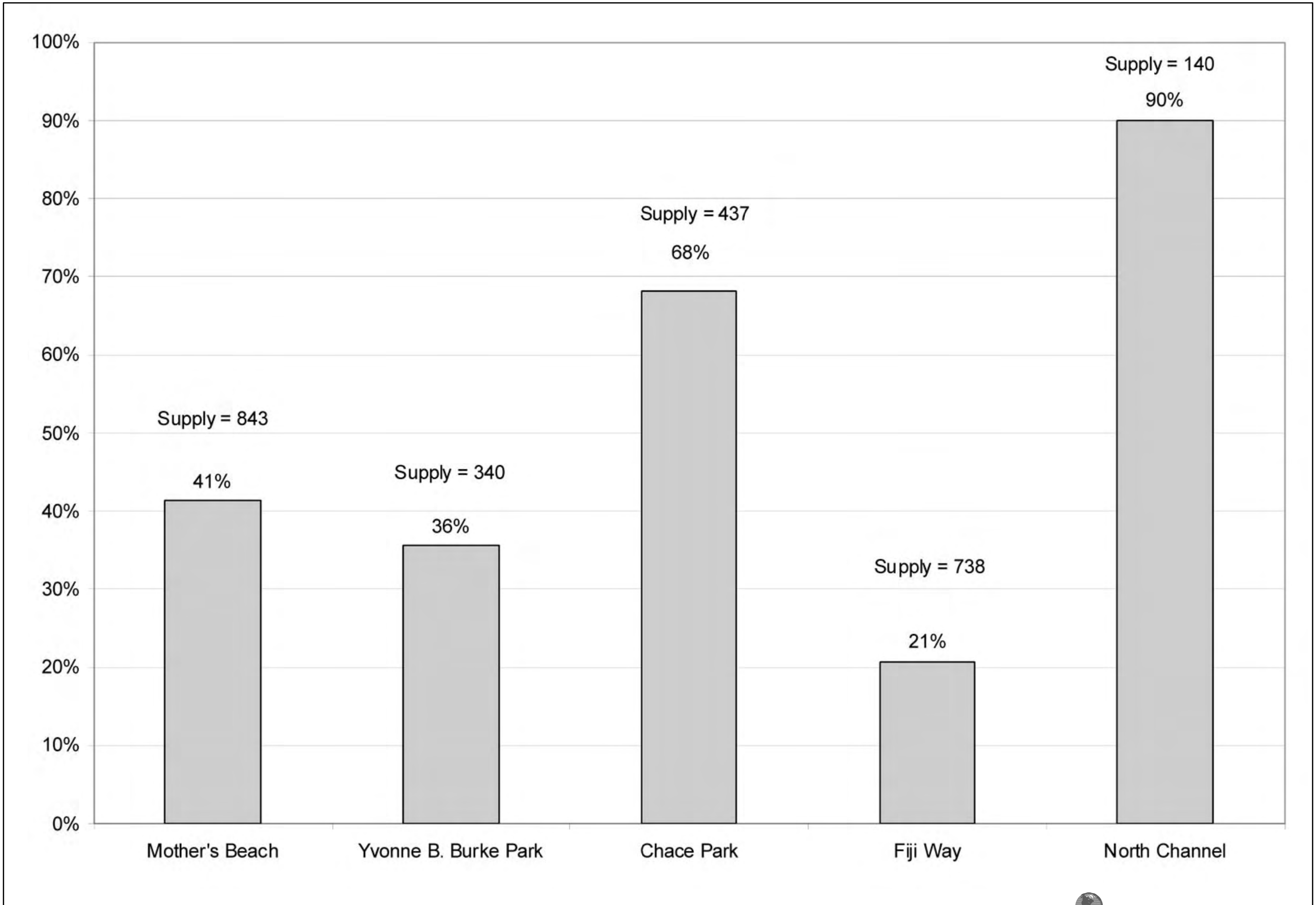


FIGURE 7-2
PEAK WEEKEND DAY EXISTING PARKING OCCUPANCY BY ACTIVITY AREA

RAJU Associates, Inc.

TABLE 3
PEAK WEEKDAY EXISTING PARKING DEMAND & OCCUPANCIES

#	Activity Area	Parking Supply	Peak Weekday Demand	Peak Weekday Occupancy	Time
1	Mother's Beach (8-OT, 9-NR, 10-IR, 11-GR)	843	Public: 201 All: 300	Public: 24% All: 36%	8PM
2	Yvonne B Burke Park (*) (5-U, 7-Q)	340	118	35%	10AM
3	Chace Park (2-49R, 4-49M, EE)	437	189	43%	1PM
4	Fiji Way (1-Fisherman's Village, Dock 52)	738	Public: 72 All: 491	Public: 10% All: 67%	8PM
5	North Channel (13-3S)	140	35	25%	8PM

Note: (*) - Formerly known as Admiralty Park

TABLE 4
PEAK WEEKEND DAY EXISTING PARKING DEMAND & OCCUPANCIES

#	Activity Area	Parking Supply	Peak Weekend Day Demand	Peak Weekend Day Occupancy	Time
1	Mother's Beach (8-OT, 9-NR, 10-IR, 11-GR)	843	Public: 348 All: 462	Public: 41% All: 55%	4PM
2	Yvonne B Burke Park (*) (5-U, 7-Q)	340	121	36%	4PM
3	Chace Park (2-49R, 4-49M, EE)	437	298	68%	4PM
4	Fiji Way (1-Fisherman's Village, Dock 52)	738	Public: 153 All: 678	Public: 21% All: 92%	4PM
5	North Channel (13-3S)	140	126	90%	4PM

Note: (*) - Formerly known as Admiralty Park

From Tables 3 and 4, the following observations can be made:

- In the Mother's Beach Activity Area, the maximum observed overall parking occupancy including the Cheesecake Factory demand was 36% and 55% during peak weekdays and weekend days, respectively. The maximum observed peak public parking occupancy was 24% and 41% during holiday peak weekdays and weekend days, respectively.
- In the Yvonne B. Burke Park Activity Area, the maximum observed parking occupancy was 35% and 36% during peak weekdays and weekend days, respectively.
- In the Chace Park Activity Area, the maximum observed parking occupancy was 43% and 68% during peak weekdays and weekend days, respectively.
- In the Fiji Way Activity Area, the maximum observed overall parking occupancy was 67% and 92% during peak holiday weekdays and weekend days, respectively. These demands included those associated with Fisherman' Village commercial and other uses as well as those associated with other uses served by Dock 52 parking. The maximum observed peak public parking occupancy (based on specialized surveys of all users to identify public parking patronage conducted by Raju Associates Inc) was 10% and 21% during holiday peak weekdays and weekend days, respectively.
- In the North Channel Activity Area, the maximum observed parking occupancy was 19% and 63% during peak weekdays and weekend days, when no other events are serviced, respectively.

In summary, for approximately 10 days in any year, the parking lots within each of the Activity Areas in Marina del Rey are somewhat better utilized. The maximum occupancy that was noted other than in the Fiji Way Activity Area was 68% in the Chace Park activity area. The maximum occupancy in the Fiji Way activity area that was noted on the peak weekend day was 92% in lots W and Dock 52. The Overflow Lots adjacent to this activity area provided additional public parking supply to bring the overall occupancy to approximately 80% indicating that there was still more than adequate available public parking within the Fiji Way Activity Area and the overflow parking lots during peak holiday weekend days. All other activity areas are currently showing maximum occupancies of 19 to 43% during peak weekdays and 33 to 68% during peak weekend days indicating a number of unused excess parking even during the peak times every year.

The purpose of this parking study is to right-size public parking supply serving each of the activity areas in the long-term (year 2030) future conditions taking into account the ambient growth and potential other public amenities development such as additional boat slips or storage and expansion of Chace Park within the Marina and their anticipated additional demands on public parking. The ambient growth includes all other growth in the region that would potentially add parking demand and was assumed to be equal to the ambient observed traffic growth in this area. A detailed assessment of these conditions is presented in the following chapter.

III. LONG-TERM FUTURE PUBLIC PARKING ASSESSMENT

This chapter provides a description of the various components that affect public parking dynamics throughout the Marina. Detailed estimations and assessments of public parking demands in the future within each of the activity areas in the Marina are performed in this chapter. A discussion of the methodology used in the preparation of these forecasts including key assumptions, parameters and other relevant information is also provided in this chapter.

The future year 2030 long-term parking evaluations included in this chapter address typical weekday and weekend day conditions as well as peak holiday weekday and weekend day conditions. Detailed assessments of all these scenarios within each of the activity areas are provided in the following sections.

FUTURE LONG-TERM (YEAR 2030) PUBLIC PARKING DEMAND ESTIMATION

The future parking demands at the various public parking lots are dependent upon the following key elements – current or existing parking demands, anticipated ambient growth due to general growth in population and anticipated growth in public parking demand due to potential expansion of public facilities and amenities (such as additional boat storage or slips and expansion of Chace Park). Further, where private commercial and public parking demands affect the occupancies of the public parking lots, only the public parking component would need to be isolated and used in the development of future public parking demand forecasts. Conversely, where public parking demand is occurring at private free parking lots adjacent to public parking lots, this demand has been captured and utilized in the development of overall future public parking demands within each of the activity areas, in this study.

The methodology used in the estimation of both peak public parking demands on typical weekdays and weekend days as well as peak holiday weekdays and weekend days is as follows:

1. Identify /determine the peak public parking demands on typical and peak weekdays and weekend days
2. Apply the anticipated ambient growth rate of 0.6% per year for 22 years based on the projected ambient traffic growth in this area. The 0.6% per year growth rate is the annual growth rate used by the Department of Public Works for projecting traffic growth in the Marina del Rey area. It is worth noting that the potential induced public parking demand, if any, due to the six pipeline development projects proposed within the Marina at parcels 10/FF, IR, OT/21, 33/NR, 52GG and 49/77 are accounted for in the ambient growth calculations noted above. The uses that are proposed within these six pipeline projects include residential, commercial retail, active seniors accommodations, hotel rooms, restaurants, visitor-serving commercial, office and dry-stack spaces and these uses will not directly cause an increase in public parking demand (per definition of public parking). However, their potential induced public parking demand, if any, is factored into the ambient growth rate noted above. Moreover, the entitlement intensities for these projects are already included in the LCP, and no additional entitlement intensity is sought.
3. Apply the anticipated additional parking demand for specific activity areas based on anticipated additional facilities. Both Mother's Beach and Chace Park Activity Areas are anticipated to have additional facilities and the potential increased public parking demand associated with these public facilities are estimated and then added to the future with ambient demand (in step 2 above) to obtain total future public parking demand by activity area

Future Long-Term Typical Weekday and Weekend Day Public Parking Demands

Utilizing the methodology described in the previous section, the future long-term typical weekday and weekend day public parking demands were estimated. Table 5 summarizes the peak parking demands and the time of day that these public parking demands are anticipated for typical weekdays and weekend days, within each of the activity areas in the Marina. Again, it is worth noting that these typical parking demands are anticipated in the Marina for more than 300 days every year.

TABLE 5

TYPICAL WEEKDAY & WEEKEND DAY FUTURE ANTICIPATED PARKING DEMAND

#	Activity Area	Typical Weekday Peak Parking Demand	Time	Typical Weekend Day Peak Parking Demand	Time
1	Mother's Beach (8-OT, 9-NR, 10-IR, 11-GR)	Public: 143 All: 167	1PM	Public: 145 All: 231	1PM 8PM
2	Yvonne B Burke Park (*) (5-U, 7-Q)	34	4PM	111	4PM
3	Chace Park (2-49R, 4-49M, EE)	92	1PM	159	4PM
4	Fiji Way (1-Fisherman's Village, Dock 52)	Public: 38 All: 233	4PM 8PM	Public: 93 All: 443	1PM
5	North Channel (13-3S)	17	8PM	36	8PM

Note: (*) - Formerly known as Admiralty Park

From Table 5, the following observations can be made:

- In the Mother's Beach Activity Area, the maximum estimated overall parking demand was 167 spaces and 231 spaces during typical weekdays and weekend days, respectively. These estimates include the parking demands associated with the Cheesecake Factory restaurant use. The maximum estimated public parking demand was 143 spaces and 145 spaces during typical weekdays and weekend days, respectively.
- In the Yvonne B. Burke Park Activity Area, the maximum estimated parking demand was 34 and 111 spaces during typical weekdays and weekend days, respectively.
- In the Chace Park Activity Area, the maximum estimated parking demand was 92 and 159 spaces during typical weekdays and weekend days, respectively.
- In the Fiji Way Activity Area, the maximum estimated parking demand was 233 and 443 spaces during typical weekdays and weekend days, respectively. These estimates include the parking associated with the Fisherman's Village commercial use as well as other uses including the Charter Boat companies. The maximum estimated public parking demand was 38 spaces and 93 spaces during typical weekdays and weekend days, respectively.
- In the North Channel Activity Area, the maximum estimated parking demand was 17 and 36 spaces during typical weekdays and weekend days, respectively.

In summary, for most of the year (i.e., more than 300 days in any year), the maximum future overall parking demand on typical weekdays and weekend days that was estimated was in the Fiji Way Activity Area. The maximum estimated future public parking demand on typical weekdays and weekend days that was estimated was in the Mother's Beach and Chace Park activity areas, respectively.

Detailed demand analyses by day and lot and by activity area are attached in Appendices C-1 and C-2 of the report.

Future Long-Term Peak Holiday Weekday & Weekend Day Public Parking Conditions

The maximum parking demands for each of the activity areas for peak holiday weekdays and weekend days (July 4th, Memorial Day and Labor Day Holidays were analyzed as noted earlier) were estimated using the methodology described earlier in this chapter. Table 6 summarizes the peak parking demands and the times of day when they occur for key holiday weekdays and weekend days, for each of the activity areas in the Marina. These key holidays parking demands are estimated mainly during the non-working weekdays and weekend days prior to the three major holidays (namely the 4th of July, Memorial Day in May and Labor Day in September every year).

From Table 6, the following observations can be made:

- In the Mother's Beach Activity Area, the maximum estimated peak overall parking demand was 364 spaces and 553 spaces including Cheesecake Factory restaurant parking demand in GR as well as the other public parking demands during peak holiday weekdays and weekend days, respectively. The maximum estimated future peak public parking demand was 252 spaces and 360 during holiday peak weekdays and weekend days, respectively.
- In the Yvonne B. Burke Park Activity Area, the maximum estimated parking demand was 134 spaces and 137 spaces during peak holiday weekdays and weekend days, respectively.
- In the Chace Park Activity Area, the maximum estimated parking demand was 222 spaces and 360 spaces during peak holiday weekdays and weekend days, respectively.
- In the Fiji Way Activity Area, the maximum estimated overall parking demand was 556 spaces and 768 spaces during peak holiday weekdays and weekend days, respectively. Again, this estimate includes the demands associated with the Fisherman's Village commercial uses as well as other uses served by lots W and Dock 52. However, the maximum estimated peak public demand was 82 spaces and 173 spaces during peak holiday weekdays and weekend days, respectively.
- In the North Channel Activity Area, the maximum estimated parking demand was 29 spaces and 100 spaces during peak holiday weekdays and weekend days, respectively.

TABLE 6
PEAK WEEKDAY & WEEKEND DAY FUTURE ANTICIPATED PARKING DEMAND

#	Activity Area	Peak Weekday Parking Demand	Time	Peak Weekend Day Parking Demand	Time
1	Mother's Beach (8-OT, 9-NR, 10-IR, 11-GR)	Public: 252 All: 364	8PM	Public: 348 All: 553	4PM
2	Yvonne B Burke Park (*) (5-U, 7-Q)	134	10AM	137	4PM
3	Chace Park (2-49R, 4-49M, EE)	222	1PM	360	4PM
4	Fiji Way (1-Fisherman's Village, Dock 52)	Public: 82 All: 556	8PM	Public: 173 All: 768	4PM
5	North Channel (13-3S)	40	8PM	143	4PM

Note: (*) - Formerly known as Admiralty Park

In summary, during the peak holiday weekdays and weekend days of the year (i.e., for approximately two weeks or 10 days during the 4^{th} of July, Memorial Day and Labor Day holiday weeks), the maximum future peak public parking demand that was estimated was in the Mother's Beach and Chace Park Activity Areas. The maximum overall peak holiday weekday and weekend day parking demand that was estimated was in the Fiji Way activitiy area. As stated earlier, this overall demand included the parking demand associated with Fisherman's Village commercial and other uses served by lots W and Dock 52.

The actual holiday day's parking demands are not included in this assessment since it is anticipated that a comprehensive parking management plan will be implemented to accommodate those demands.

A parking management plan is a powerful tool consisting of a set of actions that can be employed to manage and control parking within an area such as Marina del Rey. The parking management plan includes numerous key elements or components that work together to achieve the primary goal of managing and controlling parking operations in a specific area. The key elements may include identification of remote parking lots (parking supply); identification of all days when the use of these remote parking lots are needed; agreements with property owners that own and/or would allow operation of the remote parking lots during these days; shuttle vans or buses that would operate between these lots and various activity area destinations within Marina del Rey; appropriate signage plan to inform and direct/guide patrons to and from remote parking lots using the associated shuttle transport; and a detailed traffic management plan to guide patrons between various parking lots as well as the remote lots. One of the remote parking lots where event parking on holidays and weekend days is available is the parking structure on Parcel 76. The Los Angeles County through a parking covenant has obtained permission to use up to 860 legally striped parking spaces on holidays and weekend days. This lot could be used as a component of the parking management plan discussed above.

During the Boat Parade Day and Halibut Derby event days, only specific parking lots within the various activity areas are estimated to continue to be utilized by the event participants and viewers, and as such, these are special event days when a parking management plan to manage and control parking are recommended for implementation.

Detailed demand analyses by day and lot and by activity area are included in Appendices C-1 and C-2 of the report.

IV. PUBLIC PARKING REQUIREMENTS IN MARINA DEL REY

The Long-Term Future Year 2030 typical and peak holiday public parking demands estimated in the previous chapter are evaluated in this chapter. Based on the demand estimates for both typical and peak holiday weekend days, an appropriate measure of parking supply requirements is identified and minimum public parking supply requirements are suggested by activity area within the Marina Del Rey area.

There are six pipeline development projects proposed within the Marina at parcels 10/FF, IR, OT/21, 33/NR, 52GG and 49/77. The uses that are proposed include residential, commercial retail, Senior Facility, hotel rooms, restaurants, visitor-serving commercial, office and dry-stack spaces. These uses will not directly cause an increase in public parking demand. Although there would be no direct effect on public parking due to these projects, the potential induced public parking demand has been accounted for in the ambient growth calculations. These private development projects would be required to provide their own parking for the various proposed uses per Los Angeles County parking code requirements that are separate from the public parking assessments that are being addressed in this study.

PEAK PARKING DEMAND ESTIMATES BY ACTIVITY AREA

From the previous chapter, it was observed that the peak public parking demands within each of the activity areas varied widely between the activity areas themselves as well as between typical (300 plus) days of the year and peak holiday weekend days of a certain year.

The Fiji Way and Mother's Beach activity areas demand estimates that were developed in the previous chapter also included the overall demand at the various parking lots serving these areas. Special detailed surveys were conducted to isolate only the public parking demand component from these lots. Using the data from these days, public parking demands associated with the various parking lots and consequently, the activity areas were developed.

An examination of the current peak parking demands indicates the following:

> *On typical (300 plus days) weekdays and weekend days in a year, the current peak public parking demand varies between 5% on a weekday within Fiji Way activity area to 31% occupancies on a weekend day at the Chace Park activity area. However, on peak holiday weekdays and weekend days, the peak public parking demand varies between 10% on a weekday at the Fiji Way activity area to 68% occupancy on a weekend day at the Chace Park activity area. These data indicate that not only are the demands highly variable, for most of the year, they are also much lower than the currently available parking supply indicating that most of the parking supply is greatly under-utilized throughout the year. On certain peak weekday and weekend days of holiday weeks, and special event days, some of these parking lots within the activity areas get better utilization.*

The demand data indicates that determination of an average value would not be very useful in ascertaining the required parking supply by activity area due to the tremendous variation in the data. Statistical evaluation in cases such as these would involve determination of the 85th percentile or 90th percentile of the data (public parking demand) and then assessing the supply requirements based on that.

The 85th percentile (or 90th percentile) value is defined as that value that 85% (or 90%) of the data in the value set are equal to or less than. The 90th percentile peak public parking demand at each of the activity areas represents that value of demand that 90% of all the peak public parking demands are less than or equal to. In technical terms, 90th percentile is that position in a dataset that has 90% of the data equal to or less than it and 10% of the data greater than it.

PUBLIC PARKING SUPPLY REQUIREMENTS IN MARINA DEL REY

Both the 85th percentile and 90th percentile of peak parking demand data were determined for both the current as well as future anticipated peak conditions. Even though 85th percentile is what is typically chosen as design day for various types of uses, for public parking assessment in Marina del Rey, a conservative 90th percentile of peak public parking demand was utilized. Table 7 summarizes the 90th percentile future anticipated peak public parking demand by activity area within the Marina. As stated earlier, the public parking demand estimates at lots where parking was shared between public parking and adjacent commercial private parking demands, were developed based on specialized surveys conducted at lots W, Dock 52, NR and adjacent lots and GR.

From Table 7, it can be observed that the 90th percentile of the peak parking demand would vary between 100 spaces at the North Channel activity area to 360 spaces at Mother's Beach.
The minimum public parking supply requirement, from a conservative perspective, has been estimated to be approximately 10% more than the 90th percentile of the anticipated future peak parking demand for each of the activity areas. This would allow for patrons to find parking within the activity areas with relative ease rather than circling around and within the various parking lots within each of the activity areas. Further, this additional 10% over and above the 90th percentile design day chosen for public parking, would provide an additional factor of safety to accommodate any potential induced demand due to the six pipeline projects proposed within the Marina. Table 8 and Figure 8 summarize the minimum public parking supply requirements within each of the activity areas in the Marina.

The detailed analyses worksheets by activity area for current conditions and future anticipated 2030 peak conditions are included in Appendices D-1 and D-2.

Summarizing, based on the data, the following are recommended for public parking supply - Mother's Beach activity area: 400 spaces; Yvonne B. Burke Park activity area: 115 spaces; Chace Park activity area: 370 spaces; Fiji Way activity area: 180 spaces; North Channel activity area: 110 spaces. Parking supply for shared commercial and other non-public recreational uses would need to be over and above the minimum public parking requirements noted above.

It is also worth noting that although recommended ranges of parking supply by activity area are provided in this study, one could park in any activity area within the Marina and use the Water Taxi and / or Shuttle to reach the final destination. Further, given the proximity of parking within one activity area to uses in another activity area, it is possible for patrons to use alternate activity area parking lots and walk to their final destination.

TABLE 7
90TH PERCENTILE FUTURE PEAK PUBLIC PARKING DEMAND BY ACTIVITY AREA

Activity Area	90th Percentile Future Peak Parking Demand
Mother's Beach	360
Yvonne B Burke Park	102
Chace Park	336
Fiji Way	165
North Channel	100

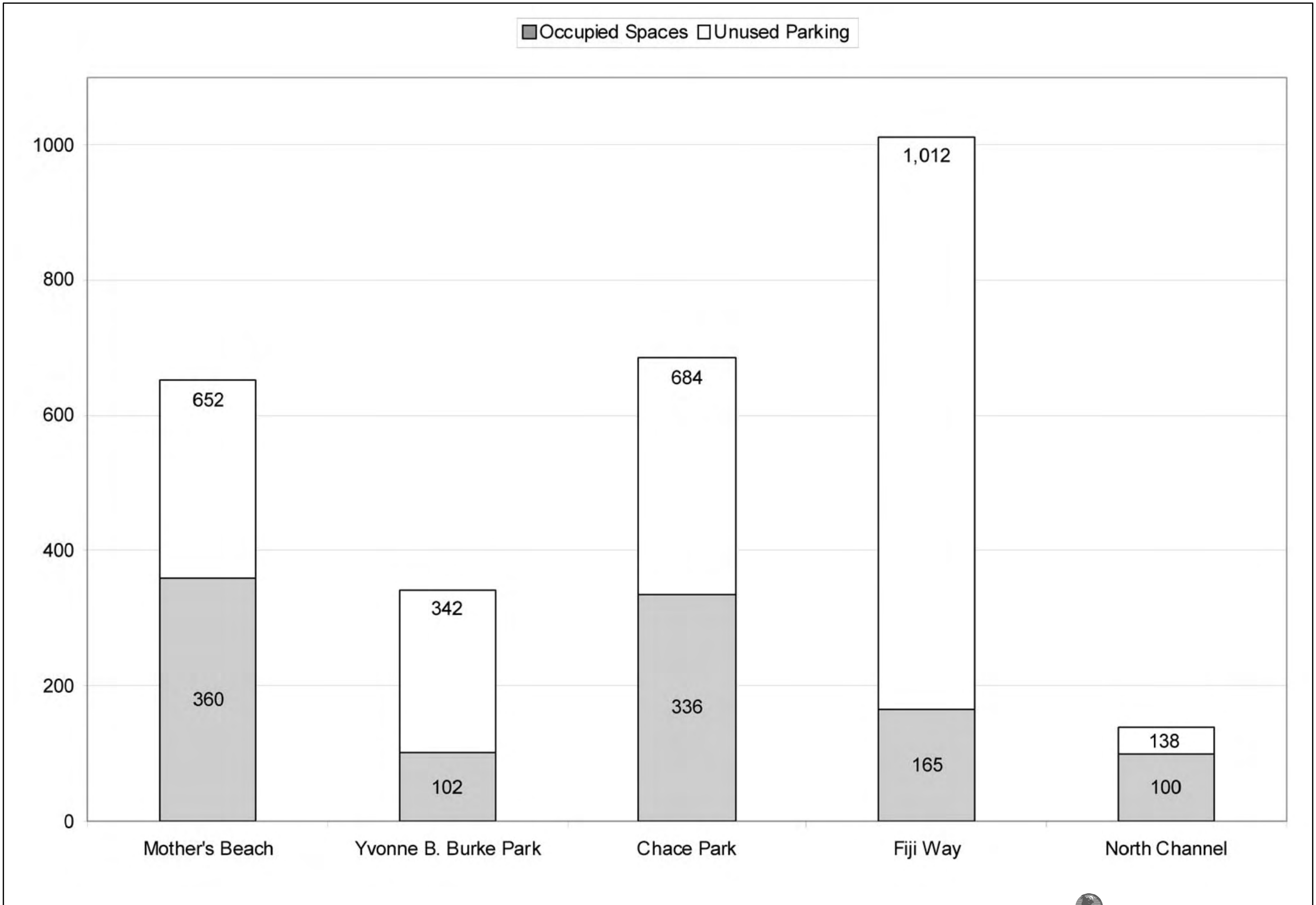


FIGURE 8
90TH PERCENTILE FUTURE PEAK PARKING DEMAND BY ACTIVITY AREA

RAJU Associates, Inc.

TABLE 8
RECOMMENDED PARKING REQUIREMENTS BY ACTIVITY AREA

Activity Area	90th Percentile Future Peak Parking Demand	Recommended Minimum Public Parking Supply
Mother's Beach	360	400
Yvonne B Burke Park	102	115
Chace Park	336	370
Fiji Way	165	180
North Channel	100	110

PARKING SUPPLY EVALUATION

The Fiji Way and Mother's Beach Activity Areas, as noted earlier, involve sharing of public parking lots by commercial (Fisherman's Village in Fiji Way), charter boat companies (in Fiji Way) and restaurant (Shanghai Reds in Fiji Way and Cheesecake Factory in Mother's Beach) uses with public recreational parking. The following sections provide an examination and analysis of the currently proposed parking within the activity areas in comparison to the minimum public parking requirements along with the private use parking demands, if any, within the same activity areas.

Adequacy of the parking operations within each of the activity areas is also discussed in the following section.

<u>Fiji Way Activity Area Overall Parking Analysis</u>

The Fisherman's Village development as well as the Charter Boat Companies and others within the Fiji Way activity area share the parking lots 1 on Parcel W and Dock 52 on Parcel 52. These developments with their peak parking demand profiles per the studies conducted by the Proposed Fisherman's Village Expansion □Enhancement Project and the public parking demand profiles per the specialized surveys and analyses conducted by Raju Associates, Inc. are summarized in Appendix E. It can be summarized from Appendix E that the peak weekday maximum overall parking demand would be 788 spaces while the maximum overall peak parking demand on weekend days would be 930 spaces. The Fisherman's Village Enhancement □Expansion Project currently calls for an overall parking supply of 1,012 spaces (an excess of 1012-930□82 spaces) to be shared by all uses including the public parking demand anticipated to be generated in the Future year 2030 conditions. An excess of 82 spaces would still be available even at peak times on a weekend day. The proposed parking supply would be adequate in terms of satisfying the shared need identified above. It is recommended that the public parking component be integrated into the Fisherman's Village Project throughout the day on all weekdays and weekend days, except on holidays when a parking management plan is recommended.

<u>Mother's Beach Activity Area Overall Parking Analysis</u>

The Cheesecake Factory Restaurant currently utilizes lot 11 on Parcel GR. A comparison of the minimum public parking requirement plus the Cheesecake Factory parking demand on lot 11 within the Mother's Beach activity area was made to the currently proposed public parking supply, within the same activity area. This overall demand was estimated to be 364 spaces on a peak weekday and 553 spaces on a peak weekend day including the Cheesecake Factory and all other potential additional boat slip development within the Mother's Beach activity area. The proposed supply within this activity area is currently planned to be 652 spaces (an excess of 652-553=99 spaces). Therefore, there would be adequate parking within this activity area with the currently proposed plan.

<u>All other Activity Areas Parking Analyses</u>

In addition to the above activity areas, a comparison of currently proposed parking supply to the minimum public parking requirements within each of the other activity areas (Yvonne B. Burke Park, Chace Park and North Shore) was conducted. It was observed that the currently proposed parking plan provides more than adequate public parking supply within each of the other activity areas also.

Summarizing, the currently proposed parking plan provides more than the required minimum public parking supply requirements within all of the activity areas as shown below:

Activity Area Name	Recommended Minimum Public Parking Supply (Number of Spaces)	Excess Number of Parking Spaces based on Proposed Parking Plan
Mother's Beach (1)	400	(652-553) = 99
Yvonne B. Burke Park	115	(342-115) = 227
Chace Park	370	(684-370) = 314
Fiji Way (2)	180	(1012-930) = 92
North Shore	110	(140-110) = 30

Note :

(1) Parking lots in this activity area are shared by public and private uses. The Cheesecake Factory restaurant uses parking lot 11 on Parcel GR. The total maximum peak overall demand including public parking demand is 553 spaces as compared to an overall supply of 652 spaces within this activity area.

(2) Parking lots in this activity area are also shared by public and private uses. Fisherman's Village, charter boats, the LACDBH office and others use parking lots 1 and Dock 52 within this activity area. The total maximum weekend day overall demand including public parking is 930 spaces as compared to an overall supply of 1,012 spaces within this activity area.

An exhibit showing the 90th percentile future public parking demand, recommended minimum public parking supply, existing parking supply and the future potential public parking supply by activity area is included in Appendix F.

V. SUMMARY OF RECOMMENDATIONS & CONCLUSIONS

A comprehensive and detailed parking study has been performed by Raju Associates, Inc. to assess the public parking needs within the Marina del Rey area of the County of Los Angeles, California. Both current and future needs are assessed through the year 2030 and right-sizing of public parking within various areas in Marina del Rey have been addressed as part of this study.

"Public Parking" is defined as the parking provided for the benefit of the general public (including visitors to and residents of Marina del Rey) for the sole purpose of utilizing and enjoying the public facilities such as the beach, parks, recreational public uses and other specific attractions that are not commercial in nature. The parking requirements associated with potential future attractions such as hotels, restaurants and other commercial establishments as well as all other private uses including residential, office, retail and other commercial types of uses are addressed separately using the Los Angeles County Parking Codes and Local Coastal Plan provisions, and as such, are not the subject of this study document. Only the requirements as they pertain to public parking as defined above are addressed in this document.

There are numerous public parking lots within the Marina del Rey area. They serve nearby residents as well as visitors to the Marina facilities. The public parking lots are all surface lots adjacent to specific attractions and serving a specific activity area. Past surveys and observations of utilization of these public parking lots have revealed that these lots are all greatly under-utilized to varying degrees almost throughout the year except for a few holidays and pre-holiday weekend days, even when the gate arms are up and no fee is charged.

A list of the public parking lots within the Marina that are evaluated in this study is provided below.

Lot Number	Parcel	Number of Parking Spaces	Remarks
1	W	502	Fisherman's Village and others use this lot
2	49R	239	
4	49M	140	
5	UR	220	Public Library uses 20 spaces
7	Q	120	
8	OT	183	FantaSea Yachts can use 94 spaces after 6 pm
9	NR	186	
10	IR	212	
11	GR	262	Cheesecake Factory uses this lot
12	FF	201	Not used much by anyone
13	3S	140	
16	EE	58	Metered parking spaces
Dock 52	52	236	LACDBH Office and others use this lot
Total		2,699	

This study is directed at identifying the appropriate parking supply to satisfy the current and anticipated future parking demands within various activity areas and right-sizing the parking lots (listed in the previous page) serving these activity areas. The estimation of parking demands for the future year 2030 was done using current observed parking demands and factoring in the growth anticipated from planned adjacent uses as well as from ambient growth due to growth in population over the next 20 years. In addition, several new improvements for visitors at Mother's Beach and potential expansion of Chace Park were factored into demand figures.

There are six pipeline development projects proposed within the Marina at parcels 10/FF, IR, OT/21, 33/NR, 52GG and 49/77. The uses that are proposed include residential, commercial retail, active seniors accommodations, hotel rooms, restaurants, visitor-serving commercial, office and dry-stack spaces. These uses will not directly cause an increase in public parking demand. Although there would be no direct effect on public parking due to these projects, the potential induced public parking demand has been accounted for in the ambient growth calculations noted above. These private development projects would be required to provide their own parking for the various proposed uses per Los Angeles County parking code requirements that are separate from the public parking assessments that are being addressed in this study.

Current and future parking demand and supply utilization analyses at each of the public parking lots within the Marina del Rey area were conducted in this study. Five major activity areas were identified and peak parking within these activity areas were determined. The supply needed to accommodate the current and future needs within each of the activity areas were also determined in this study and suggestions □recommendations for the same were made. The following executive summary highlighting the key findings of this study is presented.

- A total of 13 public parking lots and five activity areas were assessed within the study area for this project. The five activity areas are the Mother□s Beach Activity area, Yvonne B. Burke Park Activity area, Chace Park Activity area, Fiji Way Activity area and the North Channel Activity area.

- Parking supply surveys were conducted at each of the public parking lots within the study area by Los Angeles County Department of Beaches and Harbors staff and verified by Raju Associates. Based on the field inventory surveys, it was determined that the total public parking available within the studied Marina del Rey area was 2,699 spaces. This is different from the number of spaces noted in the Marina del Rey Land Use Plan (LUP) due to restriping of various lots after publication of the LUP to accommodate handicapped spaces and to improve efficiencies.

- Parking demand surveys at each of the public parking lots were conducted during the busiest weekends (Friday through Monday) of the years 2005 and 2007. Memorial Day, 4th of July and Labor Day weekends including the holidays were chosen to conduct the parking demand surveys. Raju Associates also conducted demand surveys at each of the parking lots during the recent Labor Day weekend in September 2009 and included the same in the evaluation of public parking requirements in this study. Additionally, a typical weekday and weekend day were chosen to conduct parking demand surveys to reflect typical conditions prevailing in the Marina for most of the year as it relates to parking.

- In addition to the demand surveys noted above, specialized surveys were conducted on a weekday and weekend day at all the parking lots where sharing of public parking spaces for private commercial uses are currently occurring. These were later utilized in determining the public parking demand component of the overall parking demand at these lots (as noted in the table above).

- The current peak public parking demand occupancies on typical weekdays and weekend days varies between 5□ at Fiji Way activity area to 18□ at Chace Park activity area during weekdays and 11□ at Fiji Way activity area to 31□ at Chace Park activity area during weekends. All other activity areas have parking occupancies of less than 18□ and 31□

on typical weekdays and weekend days, respectively. These occupancies are typical for most of the year (i.e., more than 300 days in a year).

- The current peak parking demand occupancies on peak holiday weekdays and weekend days varies between 10% at Fiji Way activity area to 43% at Chace Park activity area during weekdays and 21% at Fiji Way activity area to 68% at Chace Park activity area during weekend days. The Fiji Way activity area parking lots also accommodate parking demands associated with commercial and other uses adjacent to them. The public parking demand component only has been reflected in the numbers above. If the overall parking demand at the lots that serve the Fiji Way activity area including the commercial and other uses demand is examined then a 67% occupancy during peak weekdays and 92% during peak holiday weekends are observed. All other activity areas other than the Fiji Way activity area have parking occupancies of less than 43% and 68% on peak holiday weekdays and weekend days, respectively.

- The future anticipated peak parking demands on typical and peak holiday weekdays and weekend days were developed using anticipated ambient growth in the region as well as growth in public parking demand anticipated due to provision of additional public facilities within the Marina. Additional public parking demands from both the Chace Park expansion and additional public amenities at Mother's Beach were included in the estimation of the future anticipated public parking demands.

- Peak public parking demand estimates were developed by isolating the public parking demand component from various lots (Lot W, Dock 52 lot in Parcel 52, and Lot GR) and then applying the growth factors due to ambient growth and the additional demand associated with additional public facilities planned in the future. The public parking demand estimates from these lots were combined together to obtain the activity area public parking demands.

- These future anticipated demands varied greatly between activity areas as well as during typical and peak holiday weekdays and weekend days. Due to this wide variation in anticipated demands for each of the activity areas on weekdays and weekend days throughout the year, developing a measure of central tendency (such as mean or mode or median) was not meaningful. Instead, the 85th percentile and 90th percentile of the peak parking demands which are meaningful, in this context, were determined.

- The 90th percentile peak public parking demand at each of the activity areas represents that value of demand that 90% of all the peak public parking demands are less than or equal to. In technical terms, 90th percentile is that position in a dataset that has 90% of the data equal to or less than it and 10% of the data greater than it. The 90th percentile value states that at least 90% of the values in the set are less than or equal to this value.

- The 90th percentile of peak public parking demand at each of the activity areas was determined to be the following - Mother's Beach: 360 spaces; Yvonne B. Burke Park: 102 spaces; Chace Park: 336 spaces; Fiji Way: 165 spaces; and North Channel: 100 spaces.

- The minimum public parking supply at each of the activity areas was determined using the 90th percentile future (2030) peak parking demand and increasing the same by 10% to facilitate satisfactory operations within each of the parking lots serving the individual activity areas. The increased 10% supply over the peak demand by activity area would allow patrons to find parking spaces in the various parking lots serving the activity lot without having to move around or circle around between and within parking lots. The recommended minimum number of required public parking spaces by activity area is shown below.

	Activity Area	**90th-Percentile Parking Demand (number of spaces)**	**Recommended Minimum Number of Required Public Parking Spaces**
A	Mother's Beach Activity Area	360	400
B	Yvonne B. Burke Park Activity Area	102	115
C	Chace Park Activity Area	336	370
D	Fiji Way Activity Area	165	180
E	North Channel Activity Area	100	110

- Although these parking supply requirements have been recommended by activity area, it should be emphasized that one could park in any activity area within the Marina and use the Water Taxi or the Shuttle to reach the final destination.

- An evaluation of currently proposed potential public parking supply within each of the activity areas in comparison to the recommended range of minimum parking requirements was made. It was determined that more than adequate public parking supply would continue to be available within each of the activity areas. Included in the evaluation was also the overall future demand of both public and private parking demand versus proposed supply within each of the activity areas. It was determined that adequate overall parking supply would be available within each of the activity areas including even those that have commercial and other users sharing parking within the public parking lots as shown in the table on the following page.

Activity Area Name	Recommended Minimum Public Parking Supply (Number of Spaces)	Excess Parking Supply based on Proposed Parking Plan (Number of Spaces)
Mother's Beach (1)	400	(652-553) = 99
Yvonne B. Burke Park	115	(342-115) = 227
Chace Park	370	(684-370) = 314
Fiji Way (2)	180	(1012-930) = 82
North Shore	110	(140-110) = 30

Note :

(1) Parking lots in this activity area are shared by public and private uses. The Cheesecake Factory restaurant uses parking lot 11 on Parcel GR. The total maximum peak overall demand including public parking demand is 553 spaces as compared to an overall supply of 652 spaces within this activity area.

(2) Parking lots in this activity area are also shared by public and private uses. Fisherman's Village, charter boats, the LACDBH office and others use parking lots 1 and Dock 52 within this activity area. The total maximum weekend day overall demand including public parking is 930 spaces as compared to an overall supply of 1,012 spaces within this activity area.

During peak holidays namely Independence Day, Labor Day, and Memorial Day, and special event days such as Halibut Derby Day and Boat Parade Day, the parking within the Marina would need to be managed. A specific parking management plan should be developed to accommodate the peak holiday demands and shuttle people to their various specific destinations, where needed. During weekends and holidays, the county has permission to use 860 legally-marked parking spaces in parcel 76 per the current parking covenant and this parking supply could be used during event days.

APPENDIX A1-A3

A-1 Parking Supply Inventory Table

A-2 Parking Demand Survey Data

A-3 Parking Demand Special Survey Data

APPENDIX A1

Marina Del Rey Right Sizing Parking Study

Comparison of Public Parking Spaces Available (Parking Supply Inventory)

Parking Lot	General Parking Spaces	Handicap	Other	Total Available Spaces	LADBH Count	LCP Count	Potential Reason for Differences
Dock 52	226	10	0	236	239	245	Restriping for Handicapped Spaces
Fisherman's	485	17	0	502	439	483	Overall restriping of the parking lot for better efficiency
Overflow	245	7	0	252	n/a	n/a	
Lot 2	438 / 219 Boat Trailer Spaces	12	8 [1]	458 / 239	234	466 / 233	Restriping for Handicapped Spaces
Lot 4	133	7	0	140	152	124	Overall restriping of the parking lot for better efficiency
Lot 16	54	4	0	58	n/a	60	Restriping for Handicapped Spaces
Lot 5	198	3	19 [2]	220	222	240	Restriping for Handicapped Spaces and to improve circulation
Lot 7	115	5	0	120	120	118	Overall restriping of the parking lot for better efficiency
Lot 8	177	6	0	183	183	186	Restriping for Handicapped Spaces
Lot 9	180	6	0	186	187	191	Restriping for Handicapped Spaces
Lot 10	209	3	0	212	209	216	Restriping for Handicapped Spaces
Lot 11	254	8	0	262	263	264	Restriping for Handicapped Spaces
Lot 12	194	7	0	201	206	207	Restriping for Handicapped Spaces
Lot 13	136	4	0	140	138	140	No difference

Note : [1] These spaces are reserved for boat washing purposes.

[2] These spaces are reserved for the Library by permit only.

[3] These spaces are based on Field inventory surveys conducted by Raju Associates, Inc. February 2009.

APPENDIX A2
PARKING DEMAND UTILIZATION SURVEY SHEETS

5/27/2005

MAXIMUM NUMBER OF SPACES OCCUPIED FOR MEMORIAL DAY WEEKEND 2005

Parking Lot	10 A.M.	1 P.M.	4 P.M.	8 P.M.	Total Available Spaces [2]
Dock 52	N/A	N/A	N/A	N/A	**236**
(Public Component)	N/A	N/A	N/A	N/A	
Fishermans	N/A	N/A	N/A	N/A	**502**
(Public Component)	N/A	N/A	N/A	N/A	
Overflow	N/A	N/A	N/A	N/A	**252**
Lot 2	33	35	32	28	**239**
Lot 4	32	37	22	13	**140**
Lot 5	115	97	58	45	**220**
Lot 7	3	0	3	6	**120**
Lot 8	1	0	0	7	**183**
Lot 9	8	11	9	13	**186**
Lot 10	2	1	1	0	**212**
Lot 11	15	79	53	109	**262**
(Public Component)	5	29	19	40	
Lot 12	0	2	3	2	**201**
Lot 13	5	3	3	16	**140**

Mother's Beach Demand (8,9,10,11)	47	112	84	150	843
Public Component [1]	37	62	50	81	
Yvonne B. Burke Park (5,7) [3]	118	97	61	51	340
Chace Park (2,4,EE)	123	130	112	99	437
Fiji Way Demand (Fisherman's Village, Dock 52)	0	0	0	0	738
Public Component	0	0	0	0	
North Channel (13)	5	3	3	16	140
Lot 12	0	2	3	2	201

NOTE:
[1] Mother's Beach Activity area public parking demand also includes parking demand associated with Kayakers & other recreational users parking in Organic Panificio and Casa Escobar Parking Lots
[2] Total available supply based on Field inventory survey conducted by Raju Associates, Inc., February 2009
[3] Formerly known as Admiralty Park

APPENDIX A2
PARKING DEMAND UTILIZATION SURVEY SHEETS

5/28/2005

MAXIMUM NUMBER OF SPACES OCCUPIED FOR MEMORIAL DAY WEEKEND 2005

Parking Lot	10 A.M.	1 P.M.	4 P.M.	8 P.M.	Total Available Spaces [2]
Dock 52	N/A	N/A	N/A	N/A	**236**
(Public Component)	N/A	N/A	N/A	N/A	
Fishermans	N/A	N/A	N/A	N/A	**502**
(Public Component)	N/A	N/A	N/A	N/A	
Overflow	N/A	N/A	N/A	N/A	**252**
Lot 2	113	147	117	59	**239**
Lot 4	20	22	16	10	**140**
Lot 5	48	49	53	43	**220**
Lot 7	3	9	9	9	**120**
Lot 8	1	0	0	3	**183**
Lot 9	21	34	33	17	**186**
Lot 10	26	46	71	23	**212**
Lot 11	62	99	103	132	**262**
(Public Component)	7	11	11	15	
Lot 12	2	12	16	10	**201**
Lot 13	14	17	19	23	**140**

Mother's Beach Demand (8,9,10,11)	153	222	250	218	843
Public Component [1]	98	134	158	101	
Yvonne B. Burke Park (5,7) [3]	51	58	62	52	340
Chace Park (2,4,EE)	191	227	191	127	437
Fiji Way Demand (Fisherman's Village, Dock 52)	0	0	0	0	738
Public Component	0	0	0	0	
North Channel (13)	14	17	19	23	140
Lot 12	2	12	16	10	201

NOTE:

[1] Mother's Beach Activity area public parking demand also includes parking demand associated with Kayakers & other recreational users parking in Organic Panificio and Casa Escobar Parking Lots

[2] Total available supply based on Field inventory survey conducted by Raju Associates, Inc., February 2009

[3] Formerly known as Admiralty Park

APPENDIX A2
PARKING DEMAND UTILIZATION SURVEY SHEETS

5/29/2005

MAXIMUM NUMBER OF SPACES OCCUPIED FOR MEMORIAL DAY WEEKEND 2005

Parking Lot	10 A.M.	1 P.M.	4 P.M.	8 P.M.	Total Available Spaces [2]
Dock 52	N/A	N/A	N/A	N/A	**236**
(Public Component)	N/A	N/A	N/A	N/A	
Fishermans	N/A	N/A	N/A	N/A	**502**
(Public Component)	N/A	N/A	N/A	N/A	
Overflow	N/A	N/A	N/A	N/A	**252**
Lot 2	130	144	104	48	**239**
Lot 4	23	40	34	12	**140**
Lot 5	22	22	24	23	**220**
Lot 7	7	11	8	13	**120**
Lot 8	0	0	3	31	**183**
Lot 9	18	20	26	17	**186**
Lot 10	23	69	86	16	**212**
Lot 11	36	94	134	112	**262**
(Public Component)	4	10	15	12	
Lot 12	5	3	19	11	**201**
Lot 13	11	25	58	49	**140**

Mother's Beach Demand (8,9,10,11)	120	226	292	219	843
Public Component [1]	88	142	173	119	
Yvonne B. Burke Park (5,7) [3]	29	33	32	36	340
Chace Park (2,4,EE)	211	242	196	118	437
Fiji Way Demand (Fisherman's Village, Dock 52)	0	0	0	0	738
Public Component	0	0	0	0	
North Channel (13)	11	25	58	49	140
Lot 12	5	3	19	11	201

NOTE:
[1] Mother's Beach Activity area public parking demand also includes parking demand associated with Kayakers & other recreational users parking in Organic Panificio and Casa Escobar Parking Lots
[2] Total available supply based on Field inventory survey conducted by Raju Associates, Inc., February 2009
[3] Formerly known as Admiralty Park

APPENDIX A2
PARKING DEMAND UTILIZATION SURVEY SHEETS

5/30/2005

MAXIMUM NUMBER OF SPACES OCCUPIED FOR MEMORIAL DAY WEEKEND 2005

Parking Lot	10 A.M.	1 P.M.	4 P.M.	8 P.M.	Total Available Spaces [2]
Dock 52	N/A	N/A	N/A	N/A	**236**
Fishermans	N/A	N/A	N/A	N/A	**502**
Overflow	N/A	N/A	N/A	N/A	**252**
Lot 2	112	123	85	19	**239**
Lot 4	21	37	38	18	**140**
Lot 5	23	26	22	16	**220**
Lot 7	6	7	7	4	**120**
Lot 8	1	0	2	17	**183**
Lot 9	24	26	27	13	**186**
Lot 10	19	68	121	13	**212**
Lot 11	19	118	127	84	**262**
Lot 12	7	18	33	12	**201**
Lot 13	17	48	82	28	**140**

Mother's Beach Demand (8,9,10,11)	63	212	277	127	843
Yvonne B. Burke Park (5,7) [3]	29	33	29	20	340
Chace Park (2,4,EE)	191	218	181	95	437
North Channel (13)	17	48	82	28	140
Lot 12	7	18	33	12	201

NOTE:

[1] Mother's Beach Activity area public parking demand also includes parking demand associated with Kayakers & other recreational users parking in Organic Panificio and Casa Escobar Parking Lots

[2] Total available supply based on Field inventory survey conducted by Raju Associates, Inc., February 2009

[3] Formerly known as Admiralty Park

APPENDIX A2
PARKING DEMAND UTILIZATION SURVEY SHEETS

7/1/2005

MAXIMUM NUMBER OF SPACES OCCUPIED
FOR 4TH OF JULY WEEKEND 2005

Parking Lot	10 A.M.	1 P.M.	4 P.M.	8 P.M.	Total Available Spaces [2]
Dock 52	102	123	86	204	**236**
(Public Component)	27	32	23	54	
Fishermans	60	168	124	246	**502**
(Public Component)	4	12	9	18	
Overflow	64	93	87	107	**252**
Lot 2	49	48	48	46	**239**
Lot 4	8	11	7	2	**140**
Lot 5	87	28	10	1	**220**
Lot 7	1	3	5	6	**120**
Lot 8	2	1	3	97	**183**
Lot 9	15	16	13	27	**186**
Lot 10	12	22	5	0	**212**
Lot 11	23	80	67	155	**262**
(Public Component)	8	29	24	56	
Lot 12	38	30	6	4	**201**
Lot 13	9	8	6	20	**140**

Mother's Beach Demand (8,9,10,11)	73	140	109	300	843
Public Component [1]	58	89	66	201	
Yvonne B. Burke Park (5,7) [3]	88	31	15	7	340
Chace Park (2,4,EE)	115	117	113	106	437
Fiji Way Demand (Fisherman's Village, Dock 52)	162	291	210	450	738
Public Component	31	44	32	72	
North Channel (13)	9	8	6	20	140
Lot 12	38	30	6	4	201

NOTE:
[1] Mother's Beach Activity area public parking demand also includes parking demand associated with Kayakers & other recreational users parking in Organic Panificio and Casa Escobar Parking Lots
[2] Total available supply based on Field inventory survey conducted by Raju Associates, Inc., February 2009
[3] Formerly known as Admiralty Park

APPENDIX A2
PARKING DEMAND UTILIZATION SURVEY SHEETS

7/2/2005

MAXIMUM NUMBER OF SPACES OCCUPIED FOR 4TH OF JULY WEEKEND 2005

Parking Lot	10 A.M.	1 P.M.	4 P.M.	8 P.M.	Total Available Spaces [2]
Dock 52	174	153	134	132	**236**
(Public Component)	70	62	54	53	
Fishermans	109	223	196	212	**502**
(Public Component)	14	28	25	27	
Overflow	85	126	121	96	**252**
Lot 2	142	169	124	66	**239**
Lot 4	15	28	18	5	**140**
Lot 5	7	11	9	0	**220**
Lot 7	9	7	6	8	**120**
Lot 8	8	3	4	2	**183**
Lot 9	25	36	34	22	**186**
Lot 10	9	34	66	49	**212**
Lot 11	18	112	113	104	**262**
(Public Component)	2	12	13	12	
Lot 12	5	15	16	7	**201**
Lot 13	24	34	48	35	**140**

Mother's Beach Demand (8,9,10,11)	103	228	260	220	843
Public Component [1]	87	128	160	128	
Yvonne B. Burke Park (5,7) [3]	16	18	15	8	340
Chace Park (2,4,EE)	215	255	200	129	437
Fiji Way Demand (Fisherman's Village, Dock 52)	283	376	330	344	738
Public Component	84	90	79	80	
North Channel (13)	24	34	48	35	140
Lot 12	5	15	16	7	201

NOTE:

[1] Mother's Beach Activity area public parking demand also includes parking demand associated with Kayakers & other recreational users parking in Organic Panificio and Casa Escobar Parking Lots

[2] Total available supply based on Field inventory survey conducted by Raju Associates, Inc., February 2009

[3] Formerly known as Admiralty Park

APPENDIX A2
PARKING DEMAND UTILIZATION SURVEY SHEETS

7/3/2005

MAXIMUM NUMBER OF SPACES OCCUPIED FOR 4TH OF JULY WEEKEND 2005

Parking Lot	10 A.M.	1 P.M.	4 P.M.	8 P.M.	Total Available Spaces [2]
Dock 52	171	186	217	94	**236**
(Public Component)	69	75	88	38	
Fishermans	83	304	331	264	**502**
(Public Component)	11	38	42	33	
Overflow	88	130	142	83	**252**
Lot 2	139	156	132	71	**239**
Lot 4	15	26	34	4	**140**
Lot 5	2	5	3	0	**220**
Lot 7	51	84	118	76	**120**
Lot 8	6	6	26	51	**183**
Lot 9	22	39	38	22	**186**
Lot 10	44	114	156	21	**212**
Lot 11	36	127	173	136	**262**
(Public Component)	4	14	19	15	
Lot 12	6	19	34	20	**201**
Lot 13	23	41	88	67	**140**

Mother's Beach Demand (8,9,10,11)	151	329	436	273	843
Public Component [1]	119	216	282	152	
Yvonne B. Burke Park (5,7) [3]	53	89	121	76	340
Chace Park (2,4,EE)	212	240	224	133	437
Fiji Way Demand (Fisherman's Village, Dock 52)	254	490	548	358	738
Public Component	80	113	130	71	
North Channel (13)	23	41	88	67	140
Lot 12	6	19	34	20	201

NOTE:

[1] Mother's Beach Activity area public parking demand also includes parking demand associated with Kayakers & other recreational users parking in Organic Panificio and Casa Escobar Parking Lots

[2] Total available supply based on Field inventory survey conducted by Raju Associates, Inc., February 2009

[3] Formerly known as Admiralty Park

APPENDIX A2
PARKING DEMAND UTILIZATION SURVEY SHEETS

7/4/2005

MAXIMUM NUMBER OF SPACES OCCUPIED FOR 4TH OF JULY WEEKEND 2005

Parking Lot	10 A.M.	1 P.M.	4 P.M.	8 P.M.	Total Available Spaces [2]
Dock 52	146	151	164	239	236
Fishermans	67	198	254	439	502
Overflow	64	116	168	265	252
Lot 2	103	125	158	161	239
Lot 4	17	151	152	152	140
Lot 5	2	9	29	174	220
Lot 7	66	113	120	120	120
Lot 8	8	24	77	156	183
Lot 9	25	78	187	187	186
Lot 10	44	182	209	209	212
Lot 11	32	213	263	263	262
Lot 12	17	62	66	66	201
Lot 13	88	138	138	138	140

Mother's Beach Demand (8,9,10,11)	109	497	736	815	843
Yvonne B. Burke Park (5,7) [3]	68	122	149	294	340
Chace Park (2,4,EE)	178	334	368	371	437
North Channel (13)	88	138	138	138	140
Lot 12	17	62	66	66	201

NOTE:

[1] Mother's Beach Activity area public parking demand also includes parking demand associated with Kayakers & other recreational users parking in Organic Panificio and Casa Escobar Parking Lots

[2] Total available supply based on Field inventory survey conducted by Raju Associates, Inc., February 2009

[3] Formerly known as Admiralty Park

APPENDIX A2
PARKING DEMAND UTILIZATION SURVEY SHEETS

9/2/2005

MAXIMUM NUMBER OF SPACES OCCUPIED OVER THE LABOR DAY WEEKEND 2005

Parking Lot	10 A.M.	1 P.M.	4 P.M.	8 P.M.	Total Available Spaces [2]
Dock 52	127	131	115	66	**236**
(Public Component)	33	34	30	17	
Fishermans	116	140	195	301	**502**
(Public Component)	8	10	14	22	
Overflow	84	102	127	98	**252**
Lot 2	37	44	45	39	**239**
Lot 4	78	73	69	50	**140**
Lot 5	90	58	10	0	**220**
Lot 7	1	1	0	3	**120**
Lot 8	1	1	1	59	**183**
Lot 9	11	9	14	13	**186**
Lot 10	3	5	5	1	**212**
Lot 11	26	59	55	166	**262**
(Public Component)	9	21	20	60	
Lot 12	2	2	3	4	**201**
Lot 13	12	9	11	26	**140**

Mother's Beach Demand (8,9,10,11)	62	95	96	260	843
Public Component [1]	45	57	61	154	
Yvonne B. Burke Park (5,7) [3]	91	59	10	3	340
Chace Park (2,4,EE)	173	175	172	147	437
Fiji Way Demand (Fisherman's Village, Dock 52)	243	271	310	367	738
Public Component	41	44	44	39	
North Channel (13)	12	9	11	26	140
Lot 12	2	2	3	4	201

NOTE:

[1] Mother's Beach Activity area public parking demand also includes parking demand associated with Kayakers & other recreational users parking in Organic Panificio and Casa Escobar Parking Lots

[2] Total available supply based on Field inventory survey conducted by Raju Associates, Inc., February 2009

[3] Formerly known as Admiralty Park

APPENDIX A2
PARKING DEMAND UTILIZATION SURVEY SHEETS

9/3/2005

MAXIMUM NUMBER OF SPACES OCCUPIED OVER THE LABOR DAY WEEKEND 2005

Parking Lot	10 A.M.	1 P.M.	4 P.M.	8 P.M.	Total Available Spaces [2]
Dock 52	168	152	121	81	**236**
(Public Component)	68	61	49	33	
Fishermans	136	294	323	284	**502**
(Public Component)	17	37	41	36	
Overflow	79	114	118	84	**252**
Lot 2	118	122	79	63	**239**
Lot 4	62	76	64	58	**140**
Lot 5	23	24	6	4	**220**
Lot 7	3	2	14	16	**120**
Lot 8	2	1	2	15	**183**
Lot 9	27	38	33	44	**186**
Lot 10	14	54	109	7	**212**
Lot 11	24	106	111	170	**262**
(Public Component)	3	12	12	19	
Lot 12	2	10	21	7	**201**
Lot 13	19	21	41	32	**140**

Mother's Beach Demand (8,9,10,11)	110	242	298	279	843
Public Component [1]	89	148	199	128	
Yvonne B. Burke Park (5,7) [3]	26	26	20	20	340
Chace Park (2,4,EE)	238	256	201	179	437
Fiji Way Demand (Fisherman's Village, Dock 52)	304	446	444	365	738
Public Component	85	98	90	69	
North Channel (13)	19	21	41	32	140
Lot 12	2	10	21	7	201

NOTE:

[1] Mother's Beach Activity area public parking demand also includes parking demand associated with Kayakers & other recreational users parking in Organic Panificio and Casa Escobar Parking Lots

[2] Total available supply based on Field inventory survey conducted by Raju Associates, Inc., February 2009

[3] Formerly known as Admiralty Park

APPENDIX A2
PARKING DEMAND UTILIZATION SURVEY SHEETS

9/4/2005

MAXIMUM NUMBER OF SPACES OCCUPIED OVER THE LABOR DAY WEEKEND 2005

Parking Lot	10 A.M.	1 P.M.	4 P.M.	8 P.M.	Total Available Spaces [2]
Dock 52	217	236	199	103	**236**
(Public Component)	88	95	80	42	
Fishermans	192	406	374	277	**502**
(Public Component)	24	51	47	35	
Overflow	97	126	141	86	**252**
Lot 2	141	159	106	56	**239**
Lot 4	67	77	75	46	**140**
Lot 5	0	3	1	1	**220**
Lot 7	7	4	10	8	**120**
Lot 8	1	1	5	2	**183**
Lot 9	37	38	30	24	**186**
Lot 10	29	81	161	19	**212**
Lot 11	36	109	147	136	**262**
(Public Component)	4	12	16	15	
Lot 12	6	24	32	14	**201**
Lot 13	23	68	63	36	**140**

Mother's Beach Demand (8,9,10,11)	146	272	386	224	843
Public Component [1]	114	175	255	103	
Yvonne B. Burke Park (5,7) [3]	7	7	11	9	340
Chace Park (2,4,EE)	266	294	239	160	437
Fiji Way Demand (Fisherman's Village, Dock 52)	409	642	573	380	738
Public Component	112	146	127	77	
North Channel (13)	23	68	63	36	140
Lot 12	6	24	32	14	201

NOTE:

[1] Mother's Beach Activity area public parking demand also includes parking demand associated with Kayakers & other recreational users parking in Organic Panificio and Casa Escobar Parking Lots

[2] Total available supply based on Field inventory survey conducted by Raju Associates, Inc., February 2009

[3] Formerly known as Admiralty Park

APPENDIX A2
PARKING DEMAND UTILIZATION SURVEY SHEETS

9/5/2005

MAXIMUM NUMBER OF SPACES OCCUPIED OVER THE LABOR DAY WEEKEND 2005

Parking Lot	10 A.M.	1 P.M.	4 P.M.	8 P.M.	Total Available Spaces [2]
Dock 52	134	159	221	91	**236**
Fishermans	113	253	284	186	**502**
Overflow	64	92	110	73	**252**
Lot 2	109	116	71	26	**239**
Lot 4	58	71	63	53	**140**
Lot 5	1	1	0	0	**220**
Lot 7	6	9	7	4	**120**
Lot 8	1	2	10	46	**183**
Lot 9	37	48	38	16	**186**
Lot 10	24	66	78	6	**212**
Lot 11	31	139	146	100	**262**
Lot 12	6	17	30	15	**201**
Lot 13	17	46	60	20	**140**

Mother's Beach Demand (8,9,10,11)	93	255	272	168	843
Yvonne B. Burke Park (5,7) [3]	7	10	7	4	340
Chace Park (2,4,EE)	225	245	192	137	437
North Channel (13)	17	46	60	20	140
Lot 12	6	17	30	15	201

NOTE:

[1] Mother's Beach Activity area public parking demand also includes parking demand associated with Kayakers & other recreational users parking in Organic Panificio and Casa Escobar Parking Lots

[2] Total available supply based on Field inventory survey conducted by Raju Associates, Inc., February 2009

[3] Formerly known as Admiralty Park

APPENDIX A2
PARKING DEMAND UTILIZATION SURVEY SHEETS

5/25/2007

MAXIMUM NUMBER OF SPACES OCCUPIED OVER THE MEMORIAL DAY WEEKEND 2007

Parking Lot	10 A.M.	1 P.M.	4 P.M.	8 P.M.	Total Available Spaces [2]
Dock 52	84	67	77	106	**236**
(Public Component)	22	18	20	28	
Fishermans	87	180	178	385	**502**
(Public Component)	6	13	13	28	
Overflow	49	54	65	85	**252**
Lot 2	53	41	34	20	**239**
Lot 4	54	82	75	14	**140**
Lot 5	23	20	14	4	**220**
Lot 7	15	14	5	4	**120**
Lot 8	0	0	0	53	**183**
Lot 9	20	17	18	20	**186**
Lot 10	1	5	7	9	**212**
Lot 11	51	64	40	88	**262**
(Public Component)	19	23	15	32	
Lot 12	6	3	4	4	**201**
Lot 13	13	10	8	16	**140**

Mother's Beach Demand (8,9,10,11)	93	107	86	191	843
Public Component [1]	61	66	61	135	
Yvonne B. Burke Park (5,7) [3]	38	34	19	8	340
Chace Park (2,4,EE)	165	181	167	92	437
Fiji Way Demand (Fisherman's Village, Dock 52)	171	247	255	491	738
Public Component	28	31	33	56	
North Channel (13)	13	10	8	16	140
Lot 12	6	3	4	4	201

NOTE:

[1] Mother's Beach Activity area public parking demand also includes parking demand associated with Kayakers & other recreational users parking in Organic Panificio and Casa Escobar Parking Lots

[2] Total available supply based on Field inventory survey conducted by Raju Associates, Inc., February 2009

[3] Formerly known as Admiralty Park

APPENDIX A2
PARKING DEMAND UTILIZATION SURVEY SHEETS

5/26/2007

MAXIMUM NUMBER OF SPACES OCCUPIED OVER THE MEMORIAL DAY WEEKEND 2007

Parking Lot	10 A.M.	1 P.M.	4 P.M.	8 P.M.	Total Available Spaces [2]
Dock 52	177	162	155	110	**236**
(Public Component)	71	65	63	44	
Fishermans	122	346	397	402	**502**
(Public Component)	15	44	50	51	
Overflow	46	86	75	55	**252**
Lot 2	101	122	69	43	**239**
Lot 4	26	38	23	4	**140**
Lot 5	4	8	7	7	**220**
Lot 7	12	15	13	8	**120**
Lot 8	0	0	1	39	**183**
Lot 9	32	34	28	33	**186**
Lot 10	16	44	55	28	**212**
Lot 11	13	78	89	175	**262**
(Public Component)	1	9	10	19	
Lot 12	7	20	14	23	**201**
Lot 13	28	26	34	52	**140**

Mother's Beach Demand (8,9,10,11)	104	199	216	318	843
Public Component [1]	92	130	137	162	
Yvonne B. Burke Park (5,7) [3]	16	23	20	15	340
Chace Park (2,4,EE)	185	218	150	105	437
Fiji Way Demand (Fisherman's Village, Dock 52)	299	508	552	512	738
Public Component	86	109	113	95	
North Channel (13)	28	26	34	52	140
Lot 12	7	20	14	23	201

NOTE:

[1] Mother's Beach Activity area public parking demand also includes parking demand associated with Kayakers & other recreational users parking in Organic Panificio and Casa Escobar Parking Lots

[2] Total available supply based on Field inventory survey conducted by Raju Associates, Inc., February 2009

[3] Formerly known as Admiralty Park

APPENDIX A2
PARKING DEMAND UTILIZATION SURVEY SHEETS

5/27/2007

MAXIMUM NUMBER OF SPACES OCCUPIED
OVER THE MEMORIAL DAY WEEKEND 2007

Parking Lot	10 A.M.	1 P.M.	4 P.M.	8 P.M.	Total Available Spaces [2]
Dock 52	180	201	212	89	**236**
(Public Component)	73	81	86	36	
Fishermans	197	399	410	371	**502**
(Public Component)	25	51	52	47	
Overflow	57	89	92	59	**252**
Lot 2	104	177	189	51	**239**
Lot 4	17	29	32	16	**140**
Lot 5	4	4	3	0	**220**
Lot 7	30	34	93	107	**120**
Lot 8	1	36	39	45	**183**
Lot 9	28	31	36	30	**186**
Lot 10	23	60	76	20	**212**
Lot 11	17	63	131	112	**262**
(Public Component)	2	7	15	12	
Lot 12	15	19	27	20	**201**
Lot 13	34	37	69	55	**140**

Mother's Beach Demand (8,9,10,11)	112	233	325	250	843
Public Component [1]	97	177	209	150	
Yvonne B. Burke Park (5,7) [3]	34	38	96	107	340
Chace Park (2,4,EE)	179	264	279	125	437
Fiji Way Demand (Fisherman's Village, Dock 52)	377	600	622	460	738
Public Component	98	132	138	83	
North Channel (13)	34	37	69	55	140
Lot 12	15	19	27	20	201

NOTE:

[1] Mother's Beach Activity area public parking demand also includes parking demand associated with Kayakers & other recreational users parking in Organic Panificio and Casa Escobar Parking Lots

[2] Total available supply based on Field inventory survey conducted by Raju Associates, Inc., February 2009

[3] Formerly known as Admiralty Park

APPENDIX A2
PARKING DEMAND UTILIZATION SURVEY SHEETS

5/28/2007

MAXIMUM NUMBER OF SPACES OCCUPIED
OVER THE MEMORIAL DAY WEEKEND 2007

Parking Lot	10 A.M.	1 P.M.	4 P.M.	8 P.M.	Total Available Spaces [2]
Dock 52	167	173	179	62	236
Fishermans	152	270	340	103	502
Overflow	37	51	67	28	252
Lot 2	84	107	92	15	239
Lot 4	43	69	71	9	140
Lot 5	2	4	9	0	220
Lot 7	9	7	5	3	120
Lot 8	3	1	2	2	183
Lot 9	44	31	27	15	186
Lot 10	28	47	41	5	212
Lot 11	15	74	111	82	262
Lot 12	9	24	31	11	201
Lot 13	33	27	26	39	140

Mother's Beach Demand (8,9,10,11)	90	153	181	104	843
Yvonne B. Burke Park (5,7) [3]	11	11	14	3	340
Chace Park (2,4,EE)	185	234	221	82	437
North Channel (13)	33	27	26	39	140
Lot 12	9	24	31	11	201

NOTE:

[1] Mother's Beach Activity area public parking demand also includes parking demand associated with Kayakers & other recreational users parking in Organic Panificio and Casa Escobar Parking Lots

[2] Total available supply based on Field inventory survey conducted by Raju Associates, Inc., February 2009

[3] Formerly known as Admiralty Park

APPENDIX A2
PARKING DEMAND UTILIZATION SURVEY SHEETS

7/4/2007

MAXIMUM NUMBER OF SPACES OCCUPIED FOR 4TH OF JULY 2007

Parking Lot	10 A.M.	1 P.M.	4 P.M.	8 P.M.	Total Available Spaces [2]
Dock 52	101	182	237	238	**236**
Fishermans	193	225	431	439	**502**
Overflow	52	69	79	250	**252**
Lot 2	103	126	171	181	**239**
Lot 4	98	133	136	150	**140**
Lot 5	10	13	169	200	**220**
Lot 7	13	23	98	120	**120**
Lot 8	4	8	72	89	**183**
Lot 9	26	186	186	185	**186**
Lot 10	71	209	209	209	**212**
Lot 11	24	261	263	263	**262**
Lot 12	64	68	68	52	**201**
Lot 13	134	134	134	134	**140**

Mother's Beach Demand (8,9,10,11)	125	664	730	746	843
Yvonne B. Burke Park (5,7) [3]	23	36	267	320	340
Chace Park (2,4,EE)	259	317	365	389	437
North Channel (13)	134	134	134	134	140
Lot 12	64	68	68	52	201

NOTE:

[1] Mother's Beach Activity area public parking demand also includes parking demand associated with Kayakers & other recreational users parking in Organic Panificio and Casa Escobar Parking Lots

[2] Total available supply based on Field inventory survey conducted by Raju Associates, Inc., February 2009

[3] Formerly known as Admiralty Park

APPENDIX A2
PARKING DEMAND UTILIZATION SURVEY SHEETS

8/31/2007

MAXIMUM NUMBER OF SPACES OCCUPIED OVER THE LABOR DAY WEEKEND 2007

Parking Lot	10 A.M.	1 P.M.	4 P.M.	8 P.M.	Total Available Spaces [2]
Dock 52	86	69	80	100	**236**
(Public Component)	23	18	21	26	
Fishermans	105	190	185	365	**502**
(Public Component)	8	14	13	26	
Overflow	53	54	68	81	**252**
Lot 2	62	45	38	24	**239**
Lot 4	62	86	71	10	**140**
Lot 5	30	25	17	7	**220**
Lot 7	21	13	8	6	**120**
Lot 8	2	3	4	5	**183**
Lot 9	35	21	21	25	**186**
Lot 10	4	7	10	11	**212**
Lot 11	60	68	35	82	**262**
(Public Component)	22	25	13	30	
Lot 12	9	5	6	8	**201**
Lot 13	15	13	10	19	**140**

Mother's Beach Demand (8,9,10,11)	122	120	91	144	843
Public Component [1]	84	77	69	92	
Yvonne B. Burke Park (5,7) [3]	51	38	25	13	340
Chace Park (2,4,EE)	182	189	167	92	437
Fiji Way Demand (Fisherman's Village, Dock 52)	191	259	265	465	738
Public Component	31	32	34	52	
North Channel (13)	15	13	10	19	140
Lot 12	9	5	6	8	201

NOTE:

[1] Mother's Beach Activity area public parking demand also includes parking demand associated with Kayakers & other recreational users parking in Organic Panificio and Casa Escobar Parking Lots

[2] Total available supply based on Field inventory survey conducted by Raju Associates, Inc., February 2009

[3] Formerly known as Admiralty Park

APPENDIX A2
PARKING DEMAND UTILIZATION SURVEY SHEETS

9/1/2007

MAXIMUM NUMBER OF SPACES OCCUPIED OVER THE LABOR DAY WEEKEND 2007

Parking Lot	10 A.M.	1 P.M.	4 P.M.	8 P.M.	Total Available Spaces [2]
Dock 52	181	169	159	115	**236**
(Public Component)	73	68	64	46	
Fishermans	129	362	412	385	**502**
(Public Component)	16	46	52	49	
Overflow	52	90	79	62	**252**
Lot 2	103	125	71	51	**239**
Lot 4	31	43	28	9	**140**
Lot 5	8	12	11	11	**220**
Lot 7	16	18	18	12	**120**
Lot 8	2	2	3	43	**183**
Lot 9	37	39	38	41	**186**
Lot 10	21	39	41	36	**212**
Lot 11	18	85	96	185	**262**
(Public Component)	2	9	11	21	
Lot 12	10	24	18	29	**201**
Lot 13	35	39	45	59	**140**

Mother's Beach Demand (8,9,10,11)	121	208	221	348	843
Public Component [1]	105	132	136	184	
Yvonne B. Burke Park (5,7) [3]	24	30	29	23	340
Chace Park (2,4,EE)	192	226	157	118	437
Fiji Way Demand (Fisherman's Village, Dock 52)	310	531	571	500	738
Public Component	89	114	116	95	
North Channel (13)	35	39	45	59	140
Lot 12	10	24	18	29	201

NOTE:
[1] Mother's Beach Activity area public parking demand also includes parking demand associated with Kayakers & other recreational users parking in Organic Panificio and Casa Escobar Parking Lots
[2] Total available supply based on Field inventory survey conducted by Raju Associates, Inc., February 2009
[3] Formerly known as Admiralty Park

APPENDIX A2
PARKING DEMAND UTILIZATION SURVEY SHEETS

9/2/2007

MAXIMUM NUMBER OF SPACES OCCUPIED OVER THE LABOR DAY WEEKEND 2007

Parking Lot	10 A.M.	1 P.M.	4 P.M.	8 P.M.	Total Available Spaces [2]
Dock 52	202	212	239	189	**236**
(Public Component)	82	86	97	76	
Fishermans	221	412	439	376	**502**
(Public Component)	28	52	56	48	
Overflow	65	92	116	61	**252**
Lot 2	112	189	195	65	**239**
Lot 4	21	36	45	28	**140**
Lot 5	7	7	6	2	**220**
Lot 7	35	41	102	101	**120**
Lot 8	3	41	48	52	**183**
Lot 9	36	45	65	29	**186**
Lot 10	35	86	102	71	**212**
Lot 11	19	69	135	101	**262**
(Public Component)	2	8	15	11	
Lot 12	19	28	35	20	**201**
Lot 13	23	41	88	67	**140**

Mother's Beach Demand (8,9,10,11)	136	284	393	296	843
Public Component [1]	119	223	273	206	
Yvonne B. Burke Park (5,7) [3]	42	48	108	103	340
Chace Park (2,4,EE)	191	283	298	151	437
Fiji Way Demand (Fisherman's Village, Dock 52)	423	624	678	565	738
Public Component	110	138	153	124	
North Channel (13)	23	41	88	67	140
Lot 12	19	28	35	20	201

NOTE:

[1] Mother's Beach Activity area public parking demand also includes parking demand associated with Kayakers & other recreational users parking in Organic Panificio and Casa Escobar Parking Lots

[2] Total available supply based on Field inventory survey conducted by Raju Associates, Inc., February 2009

[3] Formerly known as Admiralty Park

APPENDIX A2
PARKING DEMAND UTILIZATION SURVEY SHEETS

9/3/2007

MAXIMUM NUMBER OF SPACES OCCUPIED OVER THE LABOR DAY WEEKEND 2007

Parking Lot	10 A.M.	1 P.M.	4 P.M.	8 P.M.	Total Available Spaces [2]
Dock 52	120	200	216	89	236
Fishermans	158	200	238	165	502
Overflow	34	49	69	49	252
Lot 2	120	135	113	67	239
Lot 4	67	50	43	10	140
Lot 5	5	3	3	1	220
Lot 7	5	9	15	1	120
Lot 8	2	1	1	0	183
Lot 9	37	45	41	13	186
Lot 10	53	205	142	22	212
Lot 11	37	90	112	104	262
Lot 12	7	30	35	13	201
Lot 13	56	88	113	44	140

Mother's Beach Demand (8,9,10,11)	129	341	296	139	843
Yvonne B. Burke Park (5,7) [3]	10	12	18	2	340
Chace Park (2,4,EE)	245	243	214	135	437
North Channel (13)	56	88	113	44	140
Lot 12	7	30	35	13	201

NOTE:
[1] Mother's Beach Activity area public parking demand also includes parking demand associated with Kayakers & other recreational users parking in Organic Panificio and Casa Escobar Parking Lots
[2] Total available supply based on Field inventory survey conducted by Raju Associates, Inc., February 2009
[3] Formerly known as Admiralty Park

APPENDIX A2
PARKING DEMAND UTILIZATION SURVEY SHEETS

10/25/2007

MAXIMUM NUMBER OF SPACES OCCUPIED
TYPICAL WEEKDAY

Parking Lot	10 A.M.	1 P.M.	4 P.M.	8 P.M.	Total Available Spaces [2]
Dock 52	87	96	110	51	236
(Public Component)	23	25	29	13	
Fishermans	26	90	72	155	502
(Public Component)	2	6	5	11	
Overflow	78	90	81	63	252
Lot 2	16	17	17	24	239
Lot 4	18	31	19	6	140
Chace Park (EE)	9	32	24	15	58
Lot 5	15	19	19	7	220
Lot 7	5	7	11	10	120
Lot 8	3	4	1	1	183
Lot 9	9	10	15	9	186
Lot 10	24	65	22	16	212
Lot 11	14	33	20	82	262
(Public Component)	5	12	7	30	
Lot 12	17	16	6	4	201
Lot 13	10	7	4	15	140

Mother's Beach Demand (8,9,10,11)	71	133	79	129	843
Public Component [1]	62	112	66	77	
Yvonne B. Burke Park (5,7) [3]	20	26	30	17	340
Chace Park (2,4,EE)	43	80	60	45	437
Fiji Way Demand (Fisherman's Village, Dock 52)	113	186	182	206	738
Public Component	25	31	34	24	
North Channel (13)	10	7	4	15	140
Lot 12	17	16	6	4	201

NOTE:

[1] Mother's Beach Activity area public parking demand also includes parking demand associated with Kayakers & other recreational users parking in Organic Panificio and Casa Escobar Parking Lots

[2] Total available supply based on Field inventory survey conducted by Raju Associates, Inc., February 2009

[3] Formerly known as Admiralty Park

APPENDIX A2
PARKING DEMAND UTILIZATION SURVEY SHEETS

11/3/2007

MAXIMUM NUMBER OF SPACES OCCUPIED
TYPICAL WEEKEND DAY

Parking Lot	10 A.M.	1 P.M.	4 P.M.	8 P.M.	Total Available Spaces [2]
Dock 52	108	119	91	114	**236**
(Public Component)	44	48	37	46	
Fishermans	146	272	283	255	**502**
(Public Component)	18	34	36	32	
Overflow	73	90	94	73	**252**
Lot 2	52	70	62	40	**239**
Lot 4	25	27	24	14	**140**
Chace Park (EE)	23	29	51	32	**58**
Lot 5	14	12	7	3	**220**
Lot 7	11	37	91	-	**120**
Lot 8	17	18	2	11	**183**
Lot 9	15	11	12	10	**186**
Lot 10	13	24	20	11	**212**
Lot 11	44	70	78	105	**262**
(Public Component)	5	8	9	12	
Lot 12	6	7	5	6	**201**
Lot 13	30	27	12	32	**140**

Mother's Beach Demand (8,9,10,11)	132	166	155	180	843
Public Component [1]	93	104	86	87	
Yvonne B. Burke Park (5,7) [3]	25	49	98	3	340
Chace Park (2,4,EE)	100	126	137	86	437
Fiji Way Demand (Fisherman's Village, Dock 52)	254	391	374	369	738
Public Component	62	82	73	78	
North Channel (13)	30	27	12	32	140
Lot 12	6	7	5	6	201

NOTE:

[1] Mother's Beach Activity area public parking demand also includes parking demand associated with Kayakers & other recreational users parking in Organic Panificio and Casa Escobar Parking Lots

[2] Total available supply based on Field inventory survey conducted by Raju Associates, Inc., February 2009

[3] Formerly known as Admiralty Park

APPENDIX A2
PARKING DEMAND UTILIZATION SURVEY SHEETS

12/8/2007

MAXIMUM NUMBER OF SPACES OCCUPIED FOR THE HOLIDAY BOAT PARADE

Parking Lot	10 A.M.	1 P.M.	4 P.M.	8 P.M.	Total Available Spaces [2]
Dock 52	44	60	89	207	**236**
Fishermans	210	304	380	422	**502**
Overflow	46	64	69	233	**252**
Lot 2	6	10	28	93	**239**
Lot 4	16	24	27	29	**140**
Lot 5	10	12	15	51	**220**
Lot 7	90	120	120	117	**120**
Lot 8	14	23	27	45	**183**
Lot 9	16	20	21	22	**186**
Lot 10	46	54	34	44	**212**
Lot 11	38	53	59	173	**262**
Lot 12	8	12	12	47	**201**
Lot 13	32	44	73	137	**140**

Mother's Beach Demand (8,9,10,11)	114	150	141	284	843
Yvonne B. Burke Park (5,7) [3]	100	132	135	168	340
Chace Park (2,4,EE)	80	92	113	180	437
Fiji Way Demand (Fisherman's Village, Dock 52)	254	364	469	629	738
North Channel (13)	32	44	73	137	140
Lot 12	8	12	12	47	201

NOTE:

[1] Mother's Beach Activity area public parking demand also includes parking demand associated with Kayakers & other recreational users parking in Organic Panificio and Casa Escobar Parking Lots

[2] Total available supply based on Field inventory survey conducted by Raju Associates, Inc., February 2009

[3] Formerly known as Admiralty Park

APPENDIX A2
PARKING DEMAND UTILIZATION SURVEY SHEETS

9/4/2009

MAXIMUM NUMBER OF SPACES OCCUPIED OVER THE LABOR DAY WEEKEND 2009

Parking Lot	10 A.M.	1 P.M.	4 P.M.	8 P.M.	Total Available Spaces
Dock 52	111	120	80	131	**249**
(Public Component)	29	32	21	34	
Fishermans	85	181	177	275	**498**
(Public Component)	6	13	13	20	
Overflow	43	65	75	69	**238**
Lot 2	20	32	39	31	**234**
Lot 4	2	5	4	2	**152**
Lot 5	10	11	11	2	**216**
Lot 7	8	11	12	13	**117**
Lot 8	1	0	0	57	**170**
Lot 9	10	13	12	17	**225**
	31	34	33	38	
Lot 10	62	70	59	48	**217**
Lot 11	1	43	47	129	**262**
(Public Component)	0	16	17	47	
Lot 13	22	16	16	35	**137**

Mother's Beach Public Demand (8,9,10,11)	94	120	109	190	874
Yvonne B. Burke Park (5,7)	18	22	23	15	333
Chace Park (2,4)	22	37	43	33	386
Fiji Way Public Demand (Fisherman's Village, Dock 52)	35	45	34	54	747
North Channel (13)	22	16	16	35	137

NOTE:

[1] Mother's Beach Activity area public parking demand also includes parking demand associated with Kayakers & other recreational users parking in Organic Panificio and Casa Escobar Parking Lots

[2] Total available supply based on Field inventory survey conducted by Raju Associates, Inc., February 2009

[3] Formerly known as Admiralty Park

APPENDIX A2
PARKING DEMAND UTILIZATION SURVEY SHEETS

9/5/2009

MAXIMUM NUMBER OF SPACES OCCUPIED OVER THE LABOR DAY WEEKEND 2009

Parking Lot	10 A.M.	1 P.M.	4 P.M.	8 P.M.	Total Available Spaces
Dock 52	169	171	168	118	**249**
(Public Component)	68	69	68	48	
Fishermans	205	435	399	435	**498**
(Public Component)	26	55	51	55	
Overflow	58	80	90	31	**238**
Lot 2	75	101	90	52	**234**
Lot 4	8	18	13	6	**152**
Lot 5	7	8	7	1	**216**
Lot 7	17	21	36	36	**117**
Lot 8	0	17	14	22	**170**
Lot 9	42	56	43	11	**225**
	85	99	86	54	
Lot 10	60	88	124	62	**217**
Lot 11	14	89	101	121	**262**
(Public Component)	2	10	11	13	
Lot 13	31	53	89	47	**137**

Mother's Beach Public Demand (8,9,10,11)	147	214	235	151	874
Yvonne B. Burke Park (5,7) [3]	24	29	43	37	333
Chace Park (2,4)	83	119	103	58	386
Fiji Way Public Demand (Fisherman's Village, Dock 52)	94	124	119	103	747
North Channel (13)	31	53	89	47	137

NOTE:

[1] Mother's Beach Activity area public parking demand also includes parking demand associated with Kayakers & other recreational users parking in Organic Panificio and Casa Escobar Parking Lots

[2] Total available supply based on Field inventory survey conducted by Raju Associates, Inc., February 2009

[3] Formerly known as Admiralty Park

APPENDIX A2
PARKING DEMAND UTILIZATION SURVEY SHEETS

9/6/2009

MAXIMUM NUMBER OF SPACES OCCUPIED OVER THE LABOR DAY WEEKEND 2009

Parking Lot	10 A.M.	1 P.M.	4 P.M.	8 P.M.	Total Available Spaces
Dock 52	198	226	173	104	**249**
(Public Component)	80	91	70	42	
Fishermans	194	492	498	204	**498**
(Public Component)	25	62	63	26	
Overflow	63	85	92	60	**238**
Lot 2	78	104	96	55	**234**
Lot 4	9	24	37	9	**152**
Lot 5	1	5	9	2	**216**
Lot 7	31	30	29	26	**117**
Lot 8	0	27	32	38	**170**
Lot 9	36	44	45	14	**225**
	79	87	88	57	
Lot 10	104	149	214	110	**217**
Lot 11	24	97	128	133	**262**
(Public Component)	3	11	14	15	
Lot 13	53	65	126	82	**137**

Mother's Beach Public Demand (8,9,10,11)	186	274	348	220	874
Yvonne B. Burke Park (5,7) [3]	32	35	38	28	333
Chace Park (2,4)	87	128	133	64	386
Fiji Way Public Demand (Fisherman's Village, Dock 52)	105	153	133	68	747
North Channel (13)	53	65	126	82	137

NOTE:

[1] Mother's Beach Activity area public parking demand also includes parking demand associated with Kayakers & other recreational users parking in Organic Panificio and Casa Escobar Parking Lots

[2] Total available supply based on Field inventory survey conducted by Raju Associates, Inc., February 2009

[3] Formerly known as Admiralty Park

APPENDIX A2
PARKING DEMAND UTILIZATION SURVEY SHEETS

9/7/2009

MAXIMUM NUMBER OF SPACES OCCUPIED OVER THE LABOR DAY WEEKEND 2009

Parking Lot	10 A.M.	1 P.M.	4 P.M.	8 P.M.	Total Available Spaces
Dock 52	164	160	229	154	**249**
(Public Component)	43	42	60	41	
Fishermans	162	365	297	139	**498**
(Public Component)	12	26	21	10	
Overflow	35	55	58	39	**238**
Lot 2	84	85	83	43	**234**
Lot 4	10	13	30	6	**152**
Lot 5	2	3	4	1	**216**
Lot 7	35	23	11	5	**117**
Lot 8	0	0	0	0	**170**
Lot 9	21	43	46	13	**225**
	42	64	67	34	
Lot 10	69	167	20	46	**217**
Lot 11	18	75	122	68	**262**
(Public Component)	7	27	44	25	
Lot 13	42	74	135	78	**137**

Mother's Beach Public Demand (8,9,10,11)	129	306	209	148	874
Yvonne B. Burke Park (5,7) [3]	37	26	15	6	333
Chace Park (2,4)	94	98	113	49	386
Fiji Way Public Demand (Fisherman's Village, Dock 52)	55	68	81	51	747
North Channel (13)	42	74	135	78	137

NOTE:

[1] Mother's Beach Activity area public parking demand also includes parking demand associated with Kayakers & other recreational users parking in Organic Panificio and Casa Escobar Parking Lots

[2] Total available supply based on Field inventory survey conducted by Raju Associates, Inc., February 2009

[3] Formerly known as Admiralty Park

APPENDIX A3
LOT W / FISHERMAN VILLAGE PARKING LOT
PARKING UTILIZATION - PUBLIC USERS
THURSDAY, SEPTEMBER 18, 2008

Time	Number of Cars Inbound	Number of Cars Outbound	Number of Cars in Parking Lot	Number of Cars Parked	Percent Occupied
7:00 AM	1	0	1	38	7□
7:15 AM	0	0	1		
7:30 AM	1	0	2	30	6□
7:45 AM	0	0	2		
8:00 AM	0	0	2	29	6□
8:15 AM	0	0	2		
8:30 AM	1	0	3	21	4□
8:45 AM	1	0	4		
9:00 AM	0	0	4	47	9□
9:15 AM	0	1	3		
9:30 AM	0	0	3	47	9□
9:45 AM	0	1	2		
10:00 AM	0	0	2	45	9□
10:15 AM	2	0	4		
10:30 AM	0	0	4	49	10□
10:45 AM	2	0	6		
11:00 AM	0	1	5	63	12□
11:15 AM	1	0	6		
11:30 AM	0	0	6	68	13□
11:45 AM	1	0	7		
12:00 PM	0	2	5	98	19□
12:15 PM	1	0	6		
12:30 PM	1	0	7	100	20□
12:45 PM	0	0	7		
1:00 PM	0	1	6	113	22□
1:15 PM	0	1	5		
1:30 PM	1	1	5	109	21□
1:45 PM	2	0	7		
2:00 PM	1	1	7	115	23□
2:15 PM	1	1	7		
2:30 PM	0	0	7	99	20□
2:45 PM	0	0	7		
3:00 PM	0	3	4	105	21□
3:15 PM	0	0	4		
3:30 PM	1	0	5	88	17□
3:45 PM	1	1	5	81	16□
Total	19	14			

APPENDIX A3
LOT W / FISHERMAN VILLAGE PARKING LOT
PARKING UTILIZATION - PUBLIC USERS
SATURDAY, SEPTEMBER 20, 2008

Time	Number of Cars		Parking Accumulation	Number of Cars Parked	Percent Occupied
	Inbound	Outbound			
7:00 AM	0	0	0	121	24%
7:15 AM	3	1	2		
7:30 AM	0	1	1		
7:45 AM	1	2	0		
8:00 AM	0	0	0	138	27%
8:15 AM	0	0	0		
8:30 AM	2	0	2		
8:45 AM	0	1	1		
9:00 AM	0	0	1	142	28%
9:15 AM	0	1	0		
9:30 AM	0	0	0		
9:45 AM	2	2	0		
10:00 AM	3	0	3	165	33%
10:15 AM	10	1	12		
10:30 AM	3	0	15	210	41%
10:45 AM	2	2	15		
11:00 AM	3	2	16	238	47%
11:15 AM	6	0	22		
11:30 AM	5	6	21	269	53%
11:45 AM	10	1	30		
12:00 PM	6	7	29	286	56%
12:15 PM	3	5	27		
12:30 PM	5	2	30	310	61%
12:45 PM	3	4	29		
1:00 PM	10	3	36	335	66%
1:15 PM	6	3	39		
1:30 PM	8	3	44	369	73%
1:45 PM	8	3	49		
2:00 PM	2	3	48	404	80%
2:15 PM	2	3	47		
2:30 PM	5	8	44	368	73%
2:45 PM	4	7	41		
3:00 PM	7	5	43	377	74%
3:15 PM	4	4	43		
3:30 PM	2	8	37	335	66%
3:45 PM	3	8	32	310	61%
Total	128	96			

APPENDIX A3
Parking Survey for Casa Escobar (Parcel 27)
Thursday, September 25, 2008

Time	Arriving			Departing			Parking
	Kayak	Jogger	Walking	Kayak	Jogger	Walking	Demand
5:30 AM	3	0	0	0	0	0	14
5:45 AM	0	1	0	0	0	0	**15**
6:00 AM	0	0	0	0	1	0	14
6:15 AM	0	0	0	0	10	0	4
6:30 AM	0	0	0	0	0	0	4
6:45 AM	0	0	0	0	0	0	4
7:00 AM	0	0	0	0	0	0	4
7:15 AM	0	0	0	3	0	0	1
7:30 AM	0	0	0	0	1	0	0
7:45 AM	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0

Parking Survey for The Organic Panificio (Parcel 33)
Thursday, September 25, 2008

Time	Arriving			Departing			Parking
	Kayak	Jogger	Walking	Kayak	Jogger	Walking	Demand
5:30 AM	0	1	0	0	0	0	6
5:45 AM	0	0	0	0	0	0	**6**
6:00 AM	0	0	0	0	0	0	6
6:15 AM	0	0	0	0	2	0	4
6:30 AM	0	0	0	0	0	0	4
6:45 AM	1	0	0	0	0	0	5
7:00 AM	0	0	0	0	0	0	5
7:15 AM	0	0	0	0	1	0	4
7:30 AM	0	0	0	0	0	0	4
7:45 AM	0	0	0	0	0	0	4
8:00 AM	0	0	0	0	0	0	4
8:15 AM	0	0	0	0	1	0	3
8:30 AM	0	0	0	0	0	0	3
8:45 AM	0	0	0	0	0	0	3

Parking Survey for L.A. County Parking Lot NR
Thursday, September 25, 2008

Time	Arriving			Departing			Parking
	Kayak	Jogger	Walking	Kayak	Jogger	Walking	Demand
5:30 AM	0	0	0	0	0	0	4
5:45 AM	0	0	0	0	0	0	**4**
6:00 AM	0	0	0	0	0	0	4
6:15 AM	0	0	0	0	0	0	4
6:30 AM	0	1	0	0	0	0	5
6:45 AM	0	0	0	0	0	0	5
7:00 AM	0	0	0	0	0	0	5
7:15 AM	0	1	0	0	0	0	6
7:30 AM	0	0	0	0	1	0	4
7:45 AM	0	0	0	0	0	0	4
8:00 AM	0	0	0	0	0	0	4
8:15 AM	1	0	0	0	0	0	5
8:30 AM	0	0	0	0	1	0	4
8:45 AM	0	0	0	0	0	0	4

Max Public Parking Demand □ 15□6□4 □ 25

APPENDIX A3
Parking Survey for The Organic Panificio (Parcel 33)
Thursday, September 25, 2008

Time	Arriving			Departing			Parking Demand	Public Parking Demand
	Kayak	Jogger	Walking	Kayak	Jogger	Walking		
5:00 PM	5	0	0	0	0	0	20	5
5:15 PM	0	0	0	0	0	0	20	5
5:30 PM	5	0	0	0	0	0	25	10
5:45 PM	1	0	0	0	1	0	25	10
6:00 PM	0	0	0	0	0	0	25	10
6:15 PM	7	0	0	1	0	0	31	16
6:30 PM	1	0	0	0	0	0	32	**17**
6:45 PM	1	0	0	1	0	0	32	17

Max Public Parking Demand □ 17

APPENDIX A3
Parking Survey for The Organic Panificio (Parcel 33)
Saturday, September 27, 2008

Time	Arriving			Departing			Parking Demand
	Kayak	Jogger	Walking	Kayak	Jogger	Walking	
5:30 AM	0	1	0	0	0	0	8
5:45 AM	0	0	0	0	0	0	8
6:00 AM	0	0	0	0	0	0	8
6:15 AM	0	0	0	0	0	0	8
6:30 AM	0	0	0	0	0	0	8
6:45 AM	0	0	0	0	0	0	8
7:00 AM	1	0	0	2	1	0	6
7:15 AM	4	0	0	0	0	0	10
7:30 AM	7	0	0	1	0	0	16
7:45 AM	20	0	0	0	0	0	36
8:00 AM	3	1	0	0	0	0	40
8:15 AM	1	1	0	0	0	0	42
8:30 AM	0	0	0	0	0	0	42
8:45 AM	1	0	0	0	0	0	**43**

Parking Survey for L.A. County Parking Lot NR
Saturday, September 27, 2008

Time	Arriving			Departing			Parking Demand
	Kayak	Jogger	Walking	Kayak	Jogger	Walking	
5:30 AM	0	0	0	0	0	0	11
5:45 AM	0	0	0	0	0	0	11
6:00 AM	0	0	0	0	0	0	11
6:15 AM	0	0	1	0	0	0	12
6:30 AM	0	0	0	0	0	1	11
6:45 AM	0	0	0	0	0	0	11
7:00 AM	2	0	0	0	1	0	12
7:15 AM	0	0	0	0	0	0	12
7:30 AM	2	0	0	0	0	0	14
7:45 AM	2	0	0	0	0	0	16
8:00 AM	1	0	0	0	0	0	17
8:15 AM	0	0	1	0	0	0	18
8:30 AM	0	0	0	0	0	0	18
8:45 AM	0	0	0	0	0	0	**18**

Total Public Parking Demand □43□18 □61

APPENDIX A3
Parking Survey for The Organic Panificio (Parcel 33)
Saturday, September 27, 2008

Time	Arriving			Departing			Parking
	Kayak	Jogger	Walking	Kayak	Jogger	Walking	Demand
5:00 PM	0	0	0	0	0	0	24
5:15 PM	0	0	0	0	0	0	**24**
5:30 PM	0	0	0	0	0	0	24
5:45 PM	0	0	0	0	0	0	24
6:00 PM	0	0	0	10	0	0	14
6:15 PM	0	0	0	0	0	0	14
6:30 PM	0	0	0	0	0	0	14
6:45 PM	0	0	0	0	0	0	14

Parking Survey for L.A. County Parking Lot NR
Saturday, September 27, 2008

Time	Arriving			Departing			Parking
	Kayak	Jogger	Walking	Kayak	Jogger	Walking	Demand
5:00 PM	0	0	0	0	0	0	25
5:15 PM	0	0	0	0	0	0	**25**
5:30 PM	0	0	0	0	0	0	25
5:45 PM	0	0	0	0	0	0	25
6:00 PM	0	0	0	0	0	0	25
6:15 PM	0	0	0	4	0	0	21
6:30 PM	0	0	0	0	0	0	21
6:45 PM	0	0	0	0	0	0	21

Total Public Parking Demand □24□25 □49

APPENDIX A3
Cheesecake Factory Parking Lot (Parcel 22)
Thursday, October 09, 2008

Time	Dry Cleaner		Employees		Delivery Contractors		Customers		Cheesecake Factory Lot Parking Demand	Lot GR Cheesecake Factory Parking Demand	Total
	In	Out	In	Out	In	Out	In	Out			
9:00 AM	3	3	0	0	0	2	0	0	12	0	12
9:15 AM	3	3	0	0	2	0	0	0	14	0	14
9:30 AM	1	1	1	0	3	1	0	0	17	0	17
9:45 AM	0	0	0	0	1	1	0	0	17	0	17
10:00 AM	0	0	1	0	1	1	0	0	18	0	18
10:15 AM	2	3	2	0	1	2	0	0	18	0	18
10:30 AM	0	0	0	0	2	1	0	0	19	1	20
10:45 AM	2	2	0	0	2	0	0	0	21	1	22
11:00 AM	5	3	0	0	0	2	0	0	21	4	25
11:15 AM	1	2	0	0	0	0	10	0	30	7	37
11:30 AM	2	1	0	0	0	0	6	1	36	11	47
11:45 AM	1	1	0	0	0	0	6	1	41	18	59
12:00 PM	1	0	0	0	0	0	8	3	47	19	66
12:15 PM	1	2	0	0	0	0	7	3	50	19	69
12:30 PM	1	1	0	0	0	0	8	5	53	19	72
12:45 PM	2	1	0	0	0	0	8	6	56	20	76
1:00 PM	0	0	0	0	0	0	9	9	56	23	79
1:15 PM	0	1	0	0	0	0	5	7	53	31	84
1:30 PM	2	2	0	0	0	0	5	5	53	28	81
1:45 PM	1	1	0	0	0	0	7	11	49	30	79
2:00 PM	2	2	0	0	0	0	9	9	49	31	80
2:15 PM	3	3	0	0	0	0	7	3	53	29	82
2:30 PM	0	0	0	0	0	0	6	12	47	28	75
2:45 PM	1	1	0	0	0	0	4	8	43	21	64
3:00 PM	0	0	0	0	0	0	5	8	40	21	61
3:15 PM	0	0	0	0	0	0	11	7	44	19	63
3:30 PM	1	1	1	0	0	0	6	10	41	17	58
3:45 PM	1	1	0	0	0	0	6	5	42	14	56
4:00 PM	1	1	0	0	0	0	5	0	47	11	58
4:15 PM	2	2	0	0	0	0	4	6	45	14	59
4:30 PM	1	1	0	0	0	0	5	5	45	16	61
4:45 PM	4	4	0	1	0	0	9	7	46	21	67
5:00 PM	1	0	0	1	0	0	2	9	39	22	61
5:15 PM	1	1	0	0	0	0	3	2	40	23	63
5:30 PM	1	0	0	0	0	0	7	3	45	25	70
5:45 PM	1	2	0	0	0	0	8	3	49	30	79
6:00 PM	0	0	0	0	0	0	9	5	53	30	83
6:15 PM	0	0	0	1	0	0	19	10	60	32	92
6:30 PM	1	0	0	0	0	0	6	8	59	33	92
6:45 PM	1	2	0	0	0	0	5	4	59	43	102
Total	50	48	5	3	12	10	215	175			

APPENDIX A3
Los Angeles County Lot GR
Thursday, October 09, 2008

Time	Recreational		Employees		Customers		Cheesecake Factory Parking Demand	Lot GR Public Parking Demand	Total
	In	Out	In	Out	In	Out			
9:00 AM	0	0	0	0	0	0	0	11	11
9:15 AM	0	0	0	0	0	0	0	11	11
9:30 AM	1	0	0	0	0	0	0	12	12
9:45 AM	0	0	0	0	0	0	0	12	12
10:00 AM	3	1	0	0	0	0	0	14	14
10:15 AM	0	0	0	0	0	0	0	14	14
10:30 AM	1	1	1	0	0	0	1	14	15
10:45 AM	0	0	0	0	0	0	1	14	15
11:00 AM	1	2	3	0	0	0	4	13	17
11:15 AM	1	1	3	0	0	0	7	13	20
11:30 AM	0	0	1	0	3	0	11	13	24
11:45 AM	0	0	7	0	0	0	18	13	31
12:00 PM	1	1	0	0	1	0	19	13	32
12:15 PM	1	1	0	0	0	0	19	13	32
12:30 PM	0	0	0	0	0	0	19	13	32
12:45 PM	0	0	0	0	1	0	20	13	33
1:00 PM	2	0	0	0	3	0	23	15	38
1:15 PM	0	0	0	0	8	0	31	15	46
1:30 PM	1	0	0	1	0	2	28	16	44
1:45 PM	0	2	1	0	1	0	30	14	44
2:00 PM	0	1	0	0	1	0	31	13	44
2:15 PM	0	1	0	1	1	2	29	12	41
2:30 PM	0	0	1	1	2	3	28	12	40
2:45 PM	1	1	0	0	0	7	21	12	33
3:00 PM	0	1	0	0	0	0	21	11	32
3:15 PM	0	0	0	1	0	1	19	11	30
3:30 PM	0	0	0	3	1	0	17	11	28
3:45 PM	0	0	0	2	0	1	14	11	25
4:00 PM	0	1	0	3	0	0	11	10	21
4:15 PM	0	1	3	0	0	0	14	9	23
4:30 PM	0	0	5	3	0	0	16	9	25
4:45 PM	0	0	6	1	0	0	21	9	30
5:00 PM	0	0	1	0	0	0	22	9	31
5:15 PM	0	0	3	1	0	1	23	9	32
5:30 PM	0	0	10	7	0	1	25	9	34
5:45 PM	0	0	4	2	3	0	30	9	39
6:00 PM	0	0	0	0	0	0	30	9	39
6:15 PM	0	0	2	0	1	1	32	9	41
6:30 PM	0	0	0	1	2	0	33	9	42
6:45 PM	0	0	2	0	8	0	43	9	52
Total	13	15	53	27	36	19			

APPENDIX A3
Cheesecake Factory Parking Lot (Parcel 22)
Saturday, October 11, 2008

Time	Dry Cleaner		Employees		Delivery Contractors		Customers		Cheesecake Factory Lot Parking Demand	Lot GR Cheesecake Factory Parking Demand	Total
	In	Out	In	Out	In	Out	In	Out			
7:00 AM	0	0	1	0	0	0	0	0	7	0	7
7:15 AM	0	0	4	0	1	0	0	0	12	0	12
7:30 AM	0	0	0	0	0	0	0	0	12	0	12
7:45 AM	0	0	3	2	0	1	0	0	12	0	12
8:00 AM	2	1	1	0	0	0	0	0	14	0	14
8:15 AM	0	0	2	0	0	0	0	0	16	1	17
8:30 AM	1	1	2	1	1	0	0	0	18	3	21
8:45 AM	3	1	1	2	0	0	0	0	19	6	25
9:00 AM	2	4	0	0	0	0	0	0	17	6	23
9:15 AM	5	4	0	0	0	0	0	0	18	6	24
9:30 AM	2	2	0	0	0	0	0	0	18	6	24
9:45 AM	2	1	0	0	2	3	0	0	18	6	24
10:00 AM	3	3	1	0	0	0	0	0	19	6	25
10:15 AM	4	4	1	0	0	0	0	0	20	8	28
10:30 AM	1	0	1	0	2	1	0	0	23	9	32
10:45 AM	2	2	1	1	0	0	1	0	24	10	34
11:00 AM	0	1	0	0	0	1	6	0	28	13	41
11:15 AM	4	0	0	0	0	0	13	0	45	16	61
11:30 AM	1	4	0	0	0	0	14	0	56	21	77
11:45 AM	1	1	0	0	0	0	10	1	65	23	88
12:00 PM	3	4	0	0	0	0	4	2	66	33	99
12:15 PM	3	3	0	0	0	0	1	2	65	37	102
12:30 PM	4	4	0	0	0	0	2	1	66	41	107
12:45 PM	2	2	0	0	0	0	6	9	63	44	107
1:00 PM	3	3	0	0	0	0	10	12	61	47	108
1:15 PM	3	3	0	0	0	0	10	7	64	52	116
1:30 PM	3	3	0	0	0	0	10	14	60	54	114
1:45 PM	4	3	0	0	0	0	10	5	66	57	123
2:00 PM	1	1	0	0	0	0	6	6	66	66	132
2:15 PM	1	1	0	0	0	0	7	10	63	62	125
2:30 PM	1	2	0	0	0	0	2	6	58	58	116
2:45 PM	1	1	0	0	0	0	4	10	52	63	115
3:00 PM	2	2	0	0	0	0	11	5	58	66	124
3:15 PM	1	1	0	0	0	0	3	8	53	66	119
3:30 PM	4	4	0	0	0	0	3	4	52	71	123
3:45 PM	1	1	0	0	0	0	6	11	47	70	117
4:00 PM	3	2	0	0	0	0	7	10	45	74	119
4:15 PM	3	5	0	0	0	0	5	5	43	74	117
4:30 PM	0	0	0	0	0	0	7	10	40	72	112
4:45 PM	4	4	0	0	0	0	10	2	48	77	125
5:00 PM	1	1	0	0	0	0	11	9	50	86	136
5:15 PM	0	0	0	0	0	0	13	12	51	83	134
5:30 PM	0	0	0	1	0	0	7	5	53	89	142
5:45 PM	0	0	0	0	0	0	9	3	59	96	155
6:00 PM	0	0	0	0	0	0	14	7	66	89	155
6:15 PM	0	0	0	0	0	0	4	4	66	89	155
6:30 PM	0	0	0	0	0	0	5	6	65	97	162
6:45 PM	0	0	0	0	0	0	3	3	65	101	166
Total	81	79	18	7	6	6	234	189			

APPENDIX A3
Los Angeles County Lot GR
Saturday, October 11, 2008

Time	Recreational		Employees		Customers		Cheesecake Factory Parking Demand	Lot GR Public Parking Demand	Total Parking Demand
	In	Out	In	Out	In	Out			
7:00 AM	2	0	0	0	0	0	0	7	7
7:15 AM	2	0	0	0	0	0	0	9	9
7:30 AM	0	0	0	0	0	0	0	9	9
7:45 AM	0	0	0	0	0	0	0	9	9
8:00 AM	0	0	0	0	0	0	0	9	9
8:15 AM	0	0	1	0	0	0	1	9	10
8:30 AM	0	0	2	0	0	0	3	9	12
8:45 AM	0	0	3	0	0	0	6	9	15
9:00 AM	1	0	0	0	0	0	6	10	16
9:15 AM	0	1	0	0	0	0	6	9	15
9:30 AM	0	0	0	0	0	0	6	9	15
9:45 AM	0	0	0	0	0	0	6	9	15
10:00 AM	0	0	0	0	0	0	6	9	15
10:15 AM	0	0	2	0	0	0	8	9	17
10:30 AM	2	0	1	0	0	0	9	11	20
10:45 AM	0	0	1	0	0	0	10	11	21
11:00 AM	0	0	3	0	0	0	13	11	24
11:15 AM	0	0	3	0	0	0	16	11	27
11:30 AM	2	0	5	0	0	0	21	13	34
11:45 AM	0	2	3	1	0	0	23	11	34
12:00 PM	0	1	5	0	5	0	33	10	43
12:15 PM	0	1	0	0	4	0	37	9	46
12:30 PM	0	0	2	0	2	0	41	9	50
12:45 PM	0	1	1	0	2	0	44	8	52
1:00 PM	1	0	1	0	2	0	47	9	56
1:15 PM	0	0	0	0	5	0	52	9	61
1:30 PM	1	1	1	0	1	0	54	9	63
1:45 PM	0	1	0	0	3	0	57	8	65
2:00 PM	0	0	0	0	11	2	66	8	74
2:15 PM	0	0	0	0	0	4	62	8	70
2:30 PM	0	0	0	0	0	4	58	8	66
2:45 PM	0	2	0	0	7	2	63	6	69
3:00 PM	0	0	1	0	4	2	66	6	72
3:15 PM	1	0	0	0	3	3	66	7	73
3:30 PM	0	0	4	0	4	3	71	7	78
3:45 PM	2	0	0	0	4	5	70	9	79
4:00 PM	0	1	3	0	3	2	74	8	82
4:15 PM	1	0	1	0	1	2	74	9	83
4:30 PM	0	0	2	2	1	3	72	9	81
4:45 PM	0	0	3	0	4	2	77	9	86
5:00 PM	0	0	7	1	6	3	86	9	95
5:15 PM	1	1	0	1	0	4	83	9	92
5:30 PM	0	0	3	0	7	4	89	9	98
5:45 PM	0	0	3	2	8	2	96	9	105
6:00 PM	0	0	0	8	4	3	89	9	98
6:15 PM	1	0	0	0	2	2	89	10	99
6:30 PM	0	0	0	0	11	3	97	10	107
6:45 PM	0	0	0	0	9	5	101	10	111
Total	17	12	61	15	113	60			

APPENDIX B-1/B-2

Existing Conditions Parking Demand Analysis – Typical & Peak

APPENDIX B-1
EXISTING CONDITIONS PUBLIC PARKING DEMAND ANALYSIS BY TIME OF DAY AND ACTIVITY AREA

#	Activity Area	Supply	Time	Public Demand & Utilization Profiles																											
		Existing Number of Spaces		Occupied Spaces on Weekdays							Occupied Spaces on Weekend Days													Occupied Spaces on Holidays **							
				Fri 5/27/05	Fri 7/1/05	Fri 9/2/05	Fri 5/25/07	Fri 8/31/07	Thur 10/25/07	Fri 9/04/09	Sat 5/28/05	Sun 5/29/05	Sat 7/2/05	Sun 7/3/05	Sat 9/3/05	Sun 9/4/05	Sat 5/26/07	Sun 5/27/07	Sat 9/1/07	Sun 9/2/07	Sat 11/3/07	Sat 9/05/09	Sun 9/06/09	Sat 12/8/07	Mon 5/30/05	Mon 7/4/05	Mon 9/5/05	Mon 5/28/07	Wed 7/4/07	Mon 9/3/07	Mon 9/7/07
1	Mother's Beach		10AM	37	58	45	61	84	62	94	98	88	87	119	89	114	92	97	105	119	93	147	186	114	63	109	93	90	125	129	129
			1PM	62	89	57	66	77	112	120	134	142	128	216	148	175	130	177	132	223	104	214	274	150	212	497	255	153	664	341	306
	(8-OT, 9-NR, 10-IR, 11-GR)		4PM	50	66	61	61	69	66	109	158	173	160	282	199	255	137	209	136	273	86	235	348	141	277	736	272	181	730	296	209
			8PM	81	201	154	135	92	77	190	101	119	128	152	128	103	162	150	184	206	87	151	220	284	127	815	168	104	746	139	148
			Peak	81	201	154	135	92	112	190	158	173	160	282	199	255	162	209	184	273	104	235	348	284	277	815	272	181	746	341	306
		843	Peak %	10%	24%	18%	16%	11%	13%	23%	19%	21%	19%	33%	24%	30%	19%	25%	22%	32%	12%	28%	41%	34%	33%	97%	32%	21%	88%	40%	36%
2	Yvonne B. Burke Park***		10AM	118	88	91	38	51	20	18	51	29	16	53	26	7	16	34	24	42	25	24	32	100	29	68	7	11	23	10	37
	(5-U, 7-Q)		1PM	97	31	59	34	38	26	22	58	33	18	89	26	7	23	38	30	48	49	29	35	132	33	122	10	11	36	12	26
			4PM	61	15	10	19	25	30	23	62	32	15	121	20	11	20	96	29	108	98	43	38	135	29	149	7	14	267	18	15
			8PM	51	7	3	8	13	17	15	52	36	8	76	20	9	15	107	23	103	3	37	28	168	20	294	4	3	320	2	6
			Peak	118	88	91	38	51	30	23	62	36	18	121	26	11	23	107	30	108	98	43	38	168	33	294	10	14	320	18	37
		340	Peak %	35%	26%	27%	11%	15%	9%	7%	18%	11%	5%	36%	8%	3%	7%	31%	9%	32%	29%	13%	11%	49%	10%	86%	3%	4%	94%	5%	11%
3	Chace Park (2-49R, 4-49M, EE)		10AM	123	115	173	165	182	43	22	191	211	215	212	238	266	185	179	192	191	100	83	87	80	191	178	225	185	259	245	94
			1PM	130	117	175	181	189	80	37	227	242	255	240	256	294	218	264	226	283	126	119	128	92	218	334	245	234	317	243	98
			4PM	112	113	172	167	167	60	43	191	196	200	224	201	239	150	279	157	298	137	103	133	113	181	368	192	221	365	214	113
			8PM	99	106	147	92	92	45	33	127	118	129	133	179	160	105	125	118	151	86	58	64	180	95	371	137	82	389	135	49
			Peak	130	117	175	181	189	80	43	227	242	255	240	256	294	218	279	226	298	137	119	133	180	218	371	245	234	389	245	113
		437	Peak %	30%	27%	40%	41%	43%	18%	10%	52%	55%	58%	55%	59%	67%	50%	64%	52%	68%	31%	27%	30%	41%	50%	85%	56%	54%	89%	56%	26%
4	Fiji Way *		10AM	-	31	41	28	31	25	35	-	-	84	80	85	112	86	98	89	110	62	94	105	254	-	213	247	319	294	278	55
	(Overflow Lots, 1-Fisherman's Village, Dock 52)		1PM	-	44	44	31	32	31	45	-	-	90	113	98	146	109	132	114	138	82	124	153	364	-	349	412	443	407	400	68
			4PM	-	32	44	33	34	34	34	-	-	79	130	90	127	113	138	116	153	73	119	133	469	-	418	505	519	668	454	81
			8PM	-	72	39	56	52	24	54	-	-	80	71	69	77	95	83	95	124	78	103	68	629	-	678	277	165	677	254	51
			Peak		72	44	56	52	34	54			90	130	98	146	113	138	116	153	82	124	153	629		678	505	519	677	454	81
		738	Peak %		10%	6%	8%	7%	5%	7%			12%	18%	13%	20%	15%	19%	16%	21%	11%	17%	21%	85%		92%	68%	70%	92%	62%	11%
5	North Channel		10AM	5	9	12	13	15	10	22	14	11	24	23	19	23	28	34	35	23	30	31	53	32	17	88	17	33	134	56	42
	(13-3S)		1PM	3	8	9	10	13	7	16	17	25	34	41	21	68	26	37	39	41	27	53	65	44	48	138	46	27	134	88	74
			4PM	3	6	11	8	10	4	16	19	58	48	88	41	63	34	69	45	88	12	89	126	73	82	138	60	26	134	113	135
			8PM	16	20	26	16	19	15	35	23	49	35	67	32	36	52	55	59	67	32	47	82	137	28	138	20	39	134	44	78
			Peak	16	20	26	16	19	15	35	23	58	48	88	41	68	52	69	59	88	32	89	126	137	82	138	60	39	134	113	135
		140	Peak %	11%	14%	19%	11%	14%	11%	25%	16%	41%	34%	63%	29%	49%	37%	49%	42%	63%	23%	64%	90%	98%	59%	99%	43%	28%	96%	81%	96%
	Total	2,498	Overall Peak	292	406	369	322	363	256	327	436	459	525	845	551	695	506	791	541	920	388	589	778	1,398	569	1,809	1,036	961	2,266	1,095	572
			Utilization	12%	16%	15%	13%	15%	10%	13%	17%	18%	21%	34%	22%	28%	20%	32%	22%	37%	16%	24%	31%	56%	23%	72%	41%	38%	91%	44%	23%
			Time	1PM	8PM	8PM	1PM	10AM	1PM	8PM	1PM	4PM	1PM	4PM	4PM	4PM	1PM	4PM	1PM	4PM	1PM	4PM	4PM	8PM	4PM	8PM	4PM	4PM	8PM	4PM	1PM

NOTES:
* Overflow Lots owned by US Dept. of Fish & Game, not by county; as such, they are not included in the computation of demand and availability of supply in the report.
** Holiday parking demands include non-public use parking demands.
*** Formerly known as Admiralty Park

APPENDIX B-2
EXISTING CONDITIONS PUBLIC PARKING DEMAND ANALYSIS BY DAY AND LOT

#	Activity Area	Lot Number - Parcel	Supply	Public Demand & Utilization Profiles																											
			Existing Number of Spaces	Max (Peak) Occupied Spaces on Weekdays							Max (Peak) Occupied Spaces on Weekend Days													Max Occupied Spaces on Holidays (Peak) **							
				Fri 5/27/05	Fri 7/1/05	Fri 9/2/05	Fri 5/25/07	Fri 8/31/07	Thur 10/25/07	Fri 9/04/09	Sat 5/28/05	Sun 5/29/05	Sat 7/2/05	Sun 7/3/05	Sat 9/3/05	Sun 9/4/05	Sat 5/26/07	Sun 5/27/07	Sat 9/1/07	Sun 9/2/07	Sat 11/3/07	Sat 9/5/09	Sun 9/6/09	Sat 12/8/07	Mon 5/30/05	Mon 7/4/05	Mon 9/5/05	Mon 5/28/07	Wed 7/4/07	Mon 9/3/07	Mon 9/7/09
1	Mother's Beach	8 - OT	183	7	97	59	53	5	4	57	3	31	8	51	15	5	39	45	43	52	18	22	38	45	17	156	46	3	89	2	0
		9 - NR	186	34	48	35	41	56	36	38	77	69	79	82	87	81	77	79	84	108	58	99	88	22	27	187	48	44	186	45	67
		10 - IR	212	2	22	5	9	11	65	70	71	86	66	156	109	161	55	76	41	102	24	124	214	54	121	209	78	47	209	205	167
		11 - GR	262	40	56	60	32	30	30	47	15	15	13	19	19	16	19	15	21	15	12	13	15	173	127	263	146	111	263	112	122
2	Yvonne B. Burke Park***	5 - U	220	115	87	90	23	30	19	11	53	24	11	5	24	3	8	4	12	7	14	8	9	51	26	174	1	9	200	5	4
		7 - Q	120	6	6	3	15	21	11	13	9	13	9	118	16	10	15	107	18	102	91	36	31	120	7	120	9	9	120	15	35
3	Chace Park	2 - 49R	239	35	49	45	53	62	24	39	147	144	169	156	122	159	122	189	125	195	70	101	104	93	123	161	116	107	181	135	85
		4 - 49M	140	37	11	78	82	86	31	5	22	40	28	34	76	77	38	32	43	45	27	18	37	29	38	152	71	71	150	67	30
		EE	58	58	58	58	58	58	32	58	58	58	58	58	58	58	58	58	58	58	51	58	58	58	58	58	58	58	58	58	58
4	Fiji Way	Overflow Lots *	252	n/a	107	127	85	81	90	75	n/a	n/a	126	142	118	141	86	92	90	116	94	90	92	233	n/a	265	110	67	250	69	58
		Fisherman's Village (1) - W	502	n/a	18	22	28	26	11	20	n/a	n/a	28	42	41	51	51	52	52	56	36	55	63	422	n/a	439	284	340	439	238	365
		Dock 52 - 52	236	n/a	54	34	28	26	29	34	n/a	n/a	70	88	68	95	71	86	73	97	48	69	91	207	n/a	239	221	179	238	216	229
5	North Channel	13 - 3S	140	16	20	26	16	19	15	35	23	58	48	88	41	68	52	69	59	88	32	89	126	137	82	138	60	39	134	113	135

NOTES:
* Overflow Lots owned by US Dept. of Fish & Game, not by county; as such, they are not included in the computation of demand and availability of supply in the report.
** Holiday parking demands include non-public use parking demands.
*** Formerly known as Admiralty Park

APPENDIX C-1/C-2

Future Anticipated Parking Demand Analysis – Typical & Peak

APPENDIX C-1
FUTURE ANTICIPATED CONDITIONS PUBLIC PARKING DEMAND ANALYSIS BY TIME OF DAY AND ACTIVITY AREA

#	Activity Area	Supply	Time	Anticipated Future Public Parking Demand & Utilization Profiles																			
		Proposed Number of Spaces		Occupied Spaces on Weekdays							Occupied Spaces on Weekend Days												
				Day 1	Day 2	Day 3	Day 4	Day 5	Day 6 (Typical)	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14	Day 15	Day 16	Day 17	Day 18 (Typical)	Day 19	Day 20
1	Mother's Beach		10AM	57	84	67	90	123	85	111	143	131	132	168	136	169	142	146	159	175	134	187	229
			1PM	86	120	80	94	108	143	143	191	193	185	286	209	239	186	237	190	296	145	270	332
	(8-OT, 9-NR, 10-IR, 11-GR)		4PM	72	92	87	89	99	93	129	217	231	220	360	263	326	191	277	195	363	125	288	417
			8PM	109	252	191	174	127	102	224	144	165	178	205	189	151	221	207	250	269	125	177	256
			Peak	109	252	191	174	127	143	224	217	231	220	360	263	326	221	277	250	363	145	288	417
		652	Peak %	17%	39%	29%	27%	19%	22%	34%	33%	35%	34%	55%	40%	50%	34%	42%	38%	56%	22%	27%	40%
2	Yvonne B. Burke Park***		10AM	134	100	103	43	58	23	20	58	33	18	60	29	8	18	38	27	48	28	27	36
	(5-U, 7-Q)		1PM	110	35	67	38	43	29	25	66	37	20	101	29	8	26	43	34	54	55	33	40
			4PM	69	17	11	22	28	34	26	70	36	17	137	23	12	23	109	33	122	111	49	43
			8PM	58	8	3	9	15	19	17	59	41	9	86	23	10	17	121	26	117	3	42	32
			Peak	134	100	103	43	58	34	26	70	41	20	137	29	12	26	121	34	122	111	49	43
		342	Peak %	39%	29%	30%	13%	17%	10%	8%	20%	12%	6%	40%	8%	4%	8%	35%	10%	36%	32%	14%	13%
3	Chace Park		10AM	140	130	202	192	214	51	28	226	250	256	251	285	319	218	210	227	226	120	104	109
	(2-49R, 4-49M, EE)		1PM	149	132	205	212	222	92	47	270	289	306	287	307	355	259	317	269	341	151	150	161
			4PM	126	127	201	195	195	70	54	226	231	237	267	238	286	174	336	182	360	159	130	168
			8PM	109	118	170	100	100	53	41	145	134	147	152	210	186	117	142	134	175	100	73	80
			Peak	149	132	205	212	222	92	54	270	289	306	287	307	355	259	336	269	360	159	150	168
		684	Peak %	22%	19%	30%	31%	33%	13%	8%	39%	42%	45%	42%	45%	52%	38%	49%	39%	53%	23%	39%	43%
4	Fiji Way		10AM	-	35	46	32	35	28	40	-	-	95	91	96	127	97	111	101	125	70	106	119
			1PM	-	50	50	35	36	35	51	-	-	102	128	111	165	123	149	129	156	93	140	173
	(Overflow Lots**, 1-Fisherman's Village, Dock 52)		4PM	-	36	50	37	38	38	38	-	-	89	147	102	144	128	156	131	173	83	135	151
			8PM	-	82	44	63	59	27	61	-	-	91	80	78	87	108	94	108	140	88	117	77
		*	Peak		82	50	63	59	38	61			102	147	111	165	128	156	131	173	93	140	173
		1,012	Peak %		8%	5%	6%	6%	4%	6%			10%	15%	11%	16%	13%	15%	13%	17%	9%	14%	17%
5	North Channel		10AM	6	10	14	15	17	11	25	16	12	27	26	22	26	32	38	40	26	34	35	60
	(13-3S)		1PM	3	9	10	11	15	8	18	19	28	38	46	24	77	29	42	44	46	31	60	74
			4PM	3	7	12	9	11	5	18	22	66	54	100	46	71	38	78	51	100	14	101	143
			8PM	18	23	29	18	22	17	40	26	55	40	76	36	41	59	62	67	76	36	53	93
			Peak	18	23	29	18	22	17	40	26	66	54	100	46	77	59	78	67	100	36	101	143
		138	Peak %	13%	17%	21%	13%	16%	12%	29%	19%	48%	39%	72%	33%	56%	43%	57%	49%	72%	26%	73%	104%
			Overall Peak	348	483	437	390	447	307	383	546	564	650	1,010	672	838	623	955	666	1,118	475	702	921
	Total	2,828	Utilization	12%	17%	15%	14%	16%	11%	13%	19%	20%	23%	36%	24%	30%	22%	34%	24%	40%	17%	24%	32%
			Time	1PM	8PM	8PM	1PM	10AM	1PM	8PM	1PM	4PM	1PM	4PM	4PM	4PM	1PM	4PM	1PM	4PM	1PM	4PM	4PM

Yearly Growth	0.6

NOTES:
* Includes parking supply for Fisherman's Village Development. Shared Parking is contemplated at this location.
** Overflow Lots owned by US Dept. of Fish & Game, not by county; as such, they are not included in the computation of demand and availability of supply in the report.
*** Formerly known as Admiralty Park

APPENDIX C-2
FUTURE ANTICIPATED CONDITIONS PUBLIC PARKING DEMAND ANALYSIS BY DAY AND LOT

#	Activity Area	Lot Number - Parcel	Supply	Anticipated Future Public Parking Demand & Utilization Profiles																			
			Proposed	Occupied Spaces on Weekdays							Occupied Spaces on Weekend Days												
			Number of Spaces	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6 (Typical)	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14	Day 15	Day 16	Day 17 (Typical)	Day 18	Day 19	Day 20
1	Mother's Beach	8 - OT	92	8	110	67	60	6	5	65	3	35	9	58	17	6	44	51	49	59	20	25	43
		9 - NR	69	59	75	61	67	84	62	64	120	112	122	125	130	124	120	122	127	151	101	142	131
		10 - IR	109	2	25	6	10	12	74	79	80	97	75	177	123	182	62	86	46	115	27	140	242
		11 - GR	382	45	63	68	36	34	34	53	17	17	15	22	22	18	22	17	24	17	14	15	17
2	Yvonne B. Burke Park***	5 - U	222	130	98	102	26	34	22	12	60	27	12	6	27	3	9	5	14	8	16	9	10
		7 - Q	120	7	7	3	17	24	12	15	10	15	10	134	18	11	17	121	20	115	103	41	35
3	Chace Park	2 - 49R	234	44	62	57	67	78	30	49	185	181	212	196	153	200	153	238	157	245	88	127	131
		4 - 49M	450	47	14	98	103	108	39	6	28	50	35	43	96	97	48	40	54	57	34	23	47
		EE		58	58	58	58	58	32	58	58	58	58	58	58	58	58	58	58	51	58	58	58
4	Fiji Way	Overflow Lots*	314	n/a	121	144	96	92	102	85	n/a	n/a	143	161	134	160	97	104	102	131	106	102	104
		Fisherman's Village (1) - W	1,012**	n/a	20	25	32	29	12	23	n/a	n/a	32	48	46	58	58	59	59	63	41	62	71
		Dock 52 - 52	0	n/a	61	38	32	29	33	38	n/a	n/a	79	100	77	108	80	97	83	110	54	78	103
5	North Channel	13 - 3S	138	18	23	29	18	22	17	40	26	66	54	100	46	77	59	78	67	100	36	101	143

YEARLY GROWTH	0.6

NOTES:

* Overflow Lots owned by US Dept. of Fish & Game, not by county; as such, they are not included in the computation of demand and availability of supply in the report.

** Includes parking supply for Fisherman's Village Development. Shared Parking is contemplated at this location.

*** Formerly known as Admiralty Park

APPENDIX D-1/D-2

85th & 90th Percentile Parking Demand Analysis by Activity Area – Existing & Future Long-Term Conditions

APPENDIX D-1

85TH & 90TH PERCENTILE DEMAND ANALYSIS BY ACTIVITY AREA - CURRENT CONDITIONS

Mother's Beach	
Date	Demand
Fri 5/27/05	81
Fri 8/31/07	92
Sat 11/3/07	104
Thur 10/25/07	112
Fri 5/25/07	135
Fri 9/2/05	154
Sat 5/28/05	158
Sat 7/2/05	160
Sat 5/26/07	162
Sun 5/29/05	173
Sat 9/1/07	184
Fri 09/04/09	190
Sat 9/3/05	199
Fri 7/1/05	201
Sun 5/27/07	209
Sat 9/05/09	235
Sun 9/4/05	255
Sun 9/2/07	273
Sun 7/3/05	282
Sun 9/06/09	348
90th Percentile Peak Public Parking Demand	273

Yvonne B. Burke Park*	
Date	Demand
Sun 9/4/05	11
Sat 7/2/05	18
Fri 09/04/09	23
Sat 5/26/07	23
Sat 9/3/05	26
Thur 10/25/07	30
Sat 9/1/07	30
Sun 5/29/05	36
Fri 5/25/07	38
Sun 9/06/09	38
Sat 9/05/09	43
Fri 8/31/07	51
Sat 5/28/05	62
Fri 7/1/05	88
Fri 9/2/05	91
Sat 11/3/07	98
Sun 5/27/07	107
Sun 9/2/07	108
Fri 5/27/05	118
Sun 7/3/05	121
90th Percentile Peak Public Parking	108

Chace Park	
Date	Demand
Fri 09/04/09	43
Thur 10/25/07	80
Fri 7/1/05	117
Sat 9/05/09	119
Fri 5/27/05	130
Sun 9/06/09	133
Sat 11/3/07	137
Fri 9/2/05	175
Fri 5/25/07	181
Fri 8/31/07	189
Sat 5/26/07	218
Sat 9/1/07	226
Sat 5/28/05	227
Sun 7/3/05	240
Sun 5/29/05	242
Sat 7/2/05	255
Sat 9/3/05	256
Sun 5/27/07	279
Sun 9/4/05	294
Sun 9/2/07	298
90th Percentile Peak Public Parking	279

Fiji Way	
Date	Demand
Thur 10/25/07	34
Fri 9/2/05	44
Fri 8/31/07	52
Fri 09/04/09	54
Fri 5/25/07	56
Fri 7/1/05	72
Sat 11/3/07	82
Sat 7/2/05	90
Sat 9/3/05	98
Sat 5/26/07	113
Sat 9/1/07	116
Sat 9/05/09	124
Sun 7/3/05	130
Sun 5/27/07	138
Sun 9/4/05	146
Sun 9/2/07	153
Sun 9/06/09	153
90th Percentile Peak Public Parking	146

North Channel	
Date	Demand
Thur 10/25/07	15
Fri 5/27/05	16
Fri 5/25/07	16
Fri 8/31/07	19
Fri 7/1/05	20
Sat 5/28/05	23
Fri 9/2/05	26
Sat 11/3/07	32
Fri 09/04/09	35
Sat 9/3/05	41
Sat 7/2/05	48
Sat 5/26/07	52
Sun 5/29/05	58
Sat 9/1/07	59
Sun 9/4/05	68
Sun 5/27/07	69
Sun 7/3/05	88
Sun 9/2/07	88
Sat 9/05/09	89
Sun 9/06/09	126
90th Percentile Peak Public Parking	88

LEGEND	
(light grey shading)	85th Percentile
(dark grey shading)	90th Percentile

Notes:

* Formerly known as Admiralty Park

APPENDIX D-2
85TH 90TH PERCENTILE DEMAND ANALYSIS BY ACTIVITY AREA - FUTURE CONDITIONS

Mother's Beach	
Date	Demand
Day 1	109
Day 5	127
Day 6	143
Day 18	145
Day 4	174
Day 3	191
Day 8	217
Day 10	220
Day 14	221
Day 7	224
Day 9	231
Day 16	250
Day 2	252
Day 12	263
Day 15	277
Day 19	288
Day 13	326
Day 11	360
Day 17	363
Day 20	417

90th Percentile Peak Public Parking	360

Yvonne B. Burke Park	
Date	Demand
Day 13	12
Day 10	20
Day 14	26
Day 7	26
Day 12	29
Day 16	34
Day 6	34
Day 9	41
Day 20	43
Day 4	43
Day 19	49
Day 5	58
Day 8	70
Day 2	100
Day 3	103
Day 18	111
Day 15	121
Day 17	122
Day 1	134
Day 11	137

90th Percentile Peak Public Parking	102

Chace Park	
Date	Demand
Day 7	54
Day 6	92
Day 2	132
Day 1	149
Day 19	150
Day 18	159
Day 20	168
Day 3	205
Day 4	212
Day 5	222
Day 14	259
Day 16	269
Day 8	270
Day 11	287
Day 9	289
Day 10	306
Day 12	307
Day 15	336
Day 13	355
Day 17	360

90th Percentile Peak Public Parking	336

Fiji Way	
Date	Demand
Day 6	38
Day 3	50
Day 5	59
Day 7	61
Day 4	63
Day 2	82
Day 18	93
Day 10	102
Day 12	111
Day 14	128
Day 16	131
Day 19	140
Day 11	147
Day 15	156
Day 13	165
Day 17	173
Day 20	173

90th Percentile Peak Public Parking	165

North Channel	
Date	Demand
Day 6	17
Day 1	18
Day 4	18
Day 5	22
Day 2	23
Day 8	26
Day 3	29
Day 18	36
Day 7	40
Day 12	46
Day 10	54
Day 14	59
Day 9	66
Day 16	67
Day 13	77
Day 15	78
Day 11	100
Day 17	100
Day 19	101
Day 20	143

90th Percentile Peak Public Parking	100

LEGEND	
(light shading)	85th Percentile
(dark shading)	90th Percentile

Yearly Growth	0.6

Notes:
20 spaces in Admiralty Park Activity Area (specifically lot 5) have been leased to the Public Library.
** Formerly known as Admiralty Park

APPENDIX E

FIJI WAY ACTIVITY AREA DETAILED PARKING DEMAND ANALYSIS

Appendix E
Fiji Way Activity Area Parking Analyses

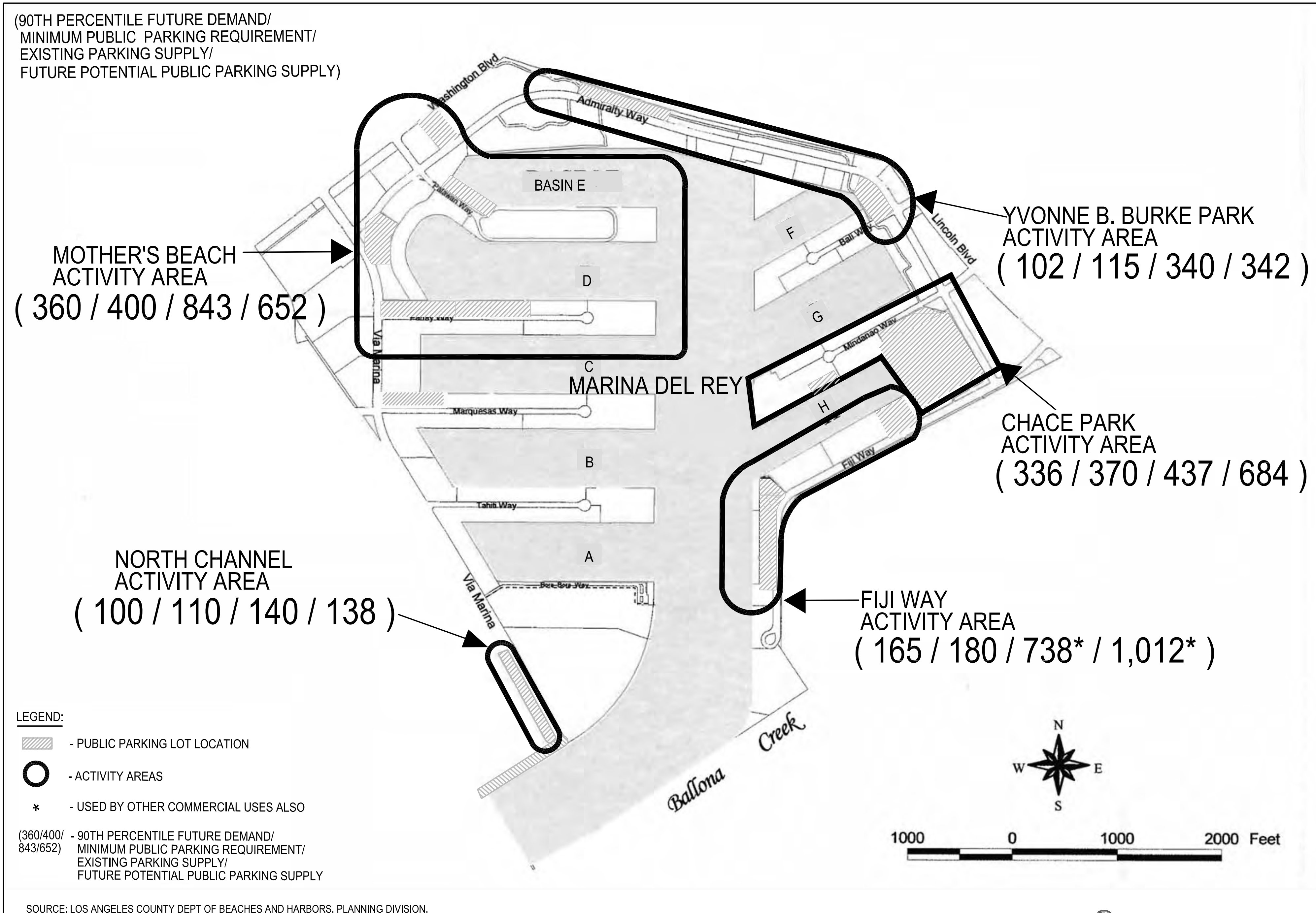
Estimated Parking Demand					
Weekday					
Time	**Fisherman Village / Commercial Demand [1]**	**Charter Boat Slip Demand [1]**	**Total Development Demand**	**Peak Public Parking Demand [2]**	**Total Demand**
2:00 PM	464	65	529	15	544
3:00 PM	354	65	419	20	439
4:00 PM	390	100	490	24	514
5:00 PM	499	135	634	29	663
6:00 PM	577	150	727	26	753
7:00 PM	591	180	771	17	788
Weekend Day					
Time	**Fisherman Village / Commercial Demand [1]**	**Charter Boat Slip Demand [1]**	**Total Development Demand**	**Peak Public Parking Demand [2]**	**Total Demand**
2:00 PM	399	240	639	49	695
3:00 PM	392	240	632	43	681
4:00 PM	389	275	664	32	700
5:00 PM	461	310	771	23	794
6:00 PM	571	310	881	20	901
7:00 PM	584	310	894	20	914
8:00 PM	599	310	909	21	930
			Proposed Total Supply = 1,012 spaces		

Note : [1] Demand data obtained from "Traffic Impact Analysis Report for the Proposed Fisherman's Village Enhancement / Expansion Project," September 2000, prepared by Hirsch / Green Transportation Consulting, Inc.

[2] Public Parking Demand for Fiji Way Activity Area obtained from Parking Surveys conducted by Raju Associates, Inc.

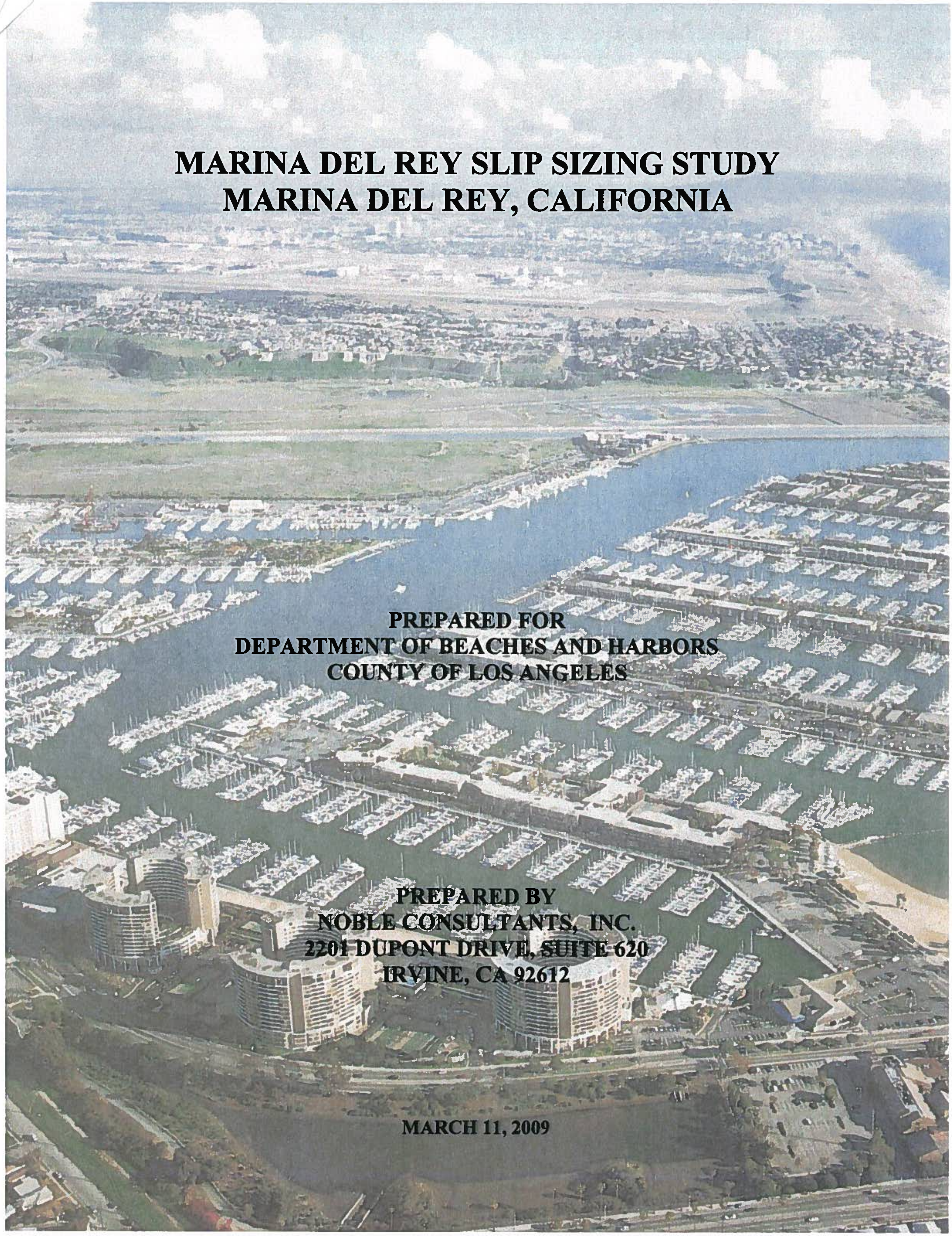
APPENDIX F

PUBLIC PARKING REQUIREMENTS, EXISTING PARKING & POTENTIAL FUTURE PARKING PROVISIONS BY ACTIVITY AREA



APPENDIX F
PARKING CONDITIONS EVALUATION SUMMARY

RAJU Associates, Inc.



MARINA DEL REY SLIP SIZING STUDY
MARINA DEL REY, CALIFORNIA

PREPARED FOR
DEPARTMENT OF BEACHES AND HARBORS
COUNTY OF LOS ANGELES

PREPARED BY
NOBLE CONSULTANTS, INC.
2201 DUPONT DRIVE, SUITE 620
IRVINE, CA 92612

MARCH 11, 2009

FINAL REPORT

MARINA DEL REY SLIP SIZING STUDY
MARINA DEL REY, CALIFORNIA

PREPARED FOR
DEPARTMENT OF BEACHES AND HARBORS
COUNTY OF LOS ANGELES

PREPARED BY:
NOBLE CONSULTANTS, INC.
2201 DUPONT DRIVE, SUITE 620
IRVINE, CA. 92612

MARCH 11, 2009

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

I EXECUTIVE SUMMARY[1]

This study reviews the boat berth slip distributions for 21 individual marinas within Marina del Rey that were originally constructed between 1964 and 1972. In addition to these marinas there are additional boat berths within Marina del Rey for commercial use (i.e. Parcels 1, 55, 56 and 61) and for temporary, transient, boating lessons/training, and government use (i.e. Parcels EE, 48, 62 and 77) that are not included within this study. Since the 21 marinas were originally constructed forty or so years ago some of these marinas have either already been replaced or in addition have been reconfigured and replaced. Numerous other marinas are now in the process of receiving approvals to be reconfigured and replaced.

The purpose of this study was to evaluate boat berth slip distribution criteria for the marinas undergoing reconfiguration and replacement in order to balance the recreational boating needs and demands for all of Marina del Rey, and in order to adequately support the Marina del Rey boating activities for the next 40 years. This study therefore reviews the changes in boat berth distributions for the Marina del Rey individual marinas; compares these distributions to other California marinas; discusses the already reconfigured marinas and the proposed marina reconfigurations within Marina del Rey; reviews the Marina del Rey slip demand, California Department of Boating and Waterways (DBAW) marina design guideline, and the change in vessel beam widths versus vessel length since the 1960s; and provides recommendations for the continued reconfiguration of Marina del Rey marinas.

The main findings of this study include the following:

- Most of the 21 marinas constructed from 1962 to 1972 within Marina del Rey did not meet the DBAW slip clear width criteria.
- Both the power boat's and sail boat's beam width versus their length have increased since the 1960's.
- Marina del Rey's highest slip vacancy rate is for slips sizes of 35 feet in length and less.
- More boats in the 30 feet length and less category are expected to move to dry boat storage.
- The existing Marina del Rey boat berth slip distribution and average slip length for the 21 marinas is less than a majority of the other California marinas.

---

[1] A draft of this report was circulated on March 24, 2009. In response to comments made on the draft, only minor typographical corrections were made in the document. Comments expressing disagreement with judgments in the document or dissatisfaction with related County policies are addressed in the Addendum, Appendix D.

- Even when including the current proposed marina reconfigurations the resulting boat berth slip distribution and average slip length for the 21 marinas is less than a majority of the other California marinas.
- In order to upgrade the slip sizes and meet the current DBAW criteria there will be some reduction in the total number of slips.
- The total number of wet berths (slips) and dry storage (stacked, un-stacked & mast-up) can be maintained at an adequate level within all of Marina del Rey for the coming years with proper planning and management.

Based on the above findings and the detailed backup presented within this study the following is recommended:

- The following two different boat berth slip length distributions are recommended; the first distribution is for all marinas combined in Marina del Rey and the second distribution is for the maximum case for an individual reconfigured marina where additional boat berth slips of 30 feet or less in length are not justified, therefore resulting in a higher percentage of slips in the 31 feet to 50 feet length.

Recommended MDR Boat Slip Size Distributions

Berth Length (feet)	Combined Percentage for all MDR Marinas	Maximum Case Percentage for Individual Marina
≤ 30'	30%	0%
31' – 35'	20%	30%
36' – 40'	19%	25%
41' – 45'	10%	20%
46' – 50'	10%	14%
> 50'	11%	11%
Total	100%	100%

- The average Marina del Rey slip length for all marinas combined and for the maximum case individual reconfigured marina should not exceed 40 feet and 44 feet, respectively unless there is justification.
- The above slip length distributions and average slip lengths should not be considered absolute since there may be some marinas that have sufficient reason to exceed these recommendations.
- A minimum slip length of 30 feet is recommended for reconfigured marinas.

- The available open water area for additional wet slips should be utilized where appropriate, such as the funnel concept that still maintains adequate boat navigation, and the available landside area for dry storage should be utilized to insure a sufficient total number of boat berthing and storage.
- Reconfigured marina dock layouts and dimensions should meet the minimum requirements for both the DBAW marina berthing guidelines and the County's Marina del Rey's design criteria.
- The minimum slip clear widths for reconfigured marinas should be based on 50 percent for power boats and 50 percent for sail boats unless there is sufficient justification to do otherwise. Reconfigured marinas should be based on single boat berthing without utilizing double boat berthing unless there is sufficient justification.
- Reconfigured marinas should provide accessible boating facilities in accordance with the current DBAW marina berthing guidelines and the County guidelines, whichever is more stringent.
- The use of dry boat storage should be maximized throughout Marina del Rey.

II INTRODUCTION

Marina del Rey was formally dedicated in 1965. The harbor complex encompasses over 800 acres of upland development and over water facilities that serve a variety of landside and water related uses including providing berthing for over 5,000 boats. Over the past 40 years the harbor has evolved into an indispensable social, environmental and economic asset for Los Angeles County, and has become one of the successful urban marinas throughout the world. As the Marina heads into the next century, the County wishes to review and implement how the existing facilities, accommodations, and access can be improved and enhanced. Recently the Department held a "brain storming" meeting with key members of the Marina del Rey waterfront community to begin the planning process to arrive at how best to improve facilities, recreational opportunities, and water accessibility for all users and interests. The Department's goals and objectives are to formulate a new marina master plan that optimally balances public and private interests, economic benefits, and recreational needs.

The purpose of this assignment was to perform a study and prepare a report of the current existing percentage of boat berth slip lengths which includes the average slip length, and the slip clear width dimensions, and forecasts the required increase in these dimensions for the marina boat docks being replaced in order to meet the current and future boating size demands to support boating activities for the next 40 years within Marina del Rey.

III DATA UTILIZED

The data utilized throughout this study came from numerous sources as summarized below:

a. Marina del Rey initial marina slip counts—from Williams-Kuebelbeck and Associates, Inc. (W&K 1975)

b. Marina del Rey marina slip counts for 1999, 2008, and proposed from County of Los Angeles, Department of Beaches and Harbors (DBH) files and marina plans.

c. Marina del Rey marina slip length distributions for 1999, 2008 and proposed from DBH and Noble Consultants, Inc. (NCI) files

d. Other California and Honolulu marina slip counts and slip length distributions from DBH and NCI files, from W&K 2001 and 2004, and from other sources.

e. Marina del Rey marina slip widths versus slip lengths from Marina del Rey marina Dock Masters and from DBH and NCI files

f. Marina del Rey marina slip vacancies from DBH files

g. California Department of Boating and Waterways (DBAW) Marina Design Guidelines, Vessel Registrations, Boat Industry Vessel Length versus Beam, Boat Sales, etc. from publications within NCI files and from internet searches.

IV CHANGES IN BOAT BERTH DISTRIBUTIONS FOR MARINA DEL REY MARINAS

From 1964 through 1972 approximately 21 recreational boating marinas were constructed within Marina del Rey during its initial development. The parcel number and marina name including year built and initial number of slips is shown in Table 1. The location of these parcel numbers within Marina del Rey is shown in Figure 1. During the ensuing years there have been some modifications of boundaries in a few of the parcels resulting in changes of the total number of slips (Parcels 44, 45 and 47) along with some changes in the lessee of the parcels. In addition, there have been some minor changes in total number of slips due to some slip reconfigurations during routine maintenance repairs, and some significant changes in total number of slips due to slip additions to both the Del Rey Yacht Club (Parcel 30) and the California Yacht Club (Parcel 132), and to more recent marina slip reconfigurations (Parcels 12, 13, 111 and 112) during dock replacement of aging facilities.

The above-referenced changes are reflected in the total number of slips shown for each Parcel from initial construction through years 1999 and 2008 in Table 1. The year 1999 is the first year that the Department of Beaches and Harbors initiated the counting and tracking of all marina slips minus the end tie and inside tie slips. However, the marina slip numbers and overall Marina del Rey slip number shown for initial construction is typically inflated since both end ties and inside ties were usually included within the slip count which has not been done for the 1999, 2008 and proposed slip totals. For instance after 56 slips were added to the Del Rey Yacht Club in 1982 the 1999 slip count became 287 implying that the initial constructed count should have been 231 slips not the shown 281 slips. Also, after 75 slips were added to the California Yacht Club in 1985 the 1999 slip count became 253 slips implying that the initial constructed count should have been 178 not the shown 245 slips. It is therefore estimated that the initial total slip number of 5,794 shown in Table 1 should be reduced by approximately ten percent to 5,215 in order to remove the counted end tie and inside tie slips when comparing to the total number of slips shown in Table 1 for 1999, 2008 and proposed.

The last column in Table 1 includes changes in the total number of slips for proposed marina replacements/reconfigurations for projects that have been approved (Parcel 15), and for projects that are currently in the approval process (Parcels 8, 10, 21, 42/43, 44, 45/47, and 125).

Table 2 presents the average slip length for each of the Marina del Rey marinas showing changes from 1999 to 2008, and to the currently proposed new marinas. This table shows that the average slip length for all of the marinas shown within the table increases from 32.5 feet to 33.9 feet from 1999 to 2008 and to 36.4 feet when including the new proposed marina reconfigurations, while the total number of slips decreased from 5,223 in 1999 to 4,731 in 2008 and to 4,255 when including the new proposed marina reconfigurations. The main reason for this decrease in total number of slips and increase in the average slip length is the overall reduction of boat berth slip lengths of 35 feet or less and the increase of boat berth slip lengths of 36 feet or more as shown in the Marina del Rey slip length distributions in Table 3 for 1999, 2008 and proposed. This slight shift to larger berth slip lengths is due to the marketplace as will be further discussed in this report.

Table 3 also includes the Marina del Rey dry boat storage for the parcel locations which have a significant number of dry storage. There is also some additional dry boat storage located throughout Marina del Rey such as in Parcels 30 and 132 that are not included within this table. This table shows that there currently exists 817 dry boat storage with an increase to 1088 when including the new proposed projects, which is an increase of 271 dry boat storage. A vast majority of the dry boat storage is for boats of 35 feet or less in length.

If the existing wet boat storage (marina berths) is added to the existing dry boat storage and then compared to the "proposed" wet and dry boat storage, the total boat storage changes from an existing total of 5,548 boats to a proposed total of 5,343 boats as shown in Table 3. This amounts to only a 3.7% reduction. Figure 2 presents the average slip length in bar graph format for 1999, 2008 and proposed for all the marinas shown in Table 2 for easy comparison between the marinas and years.

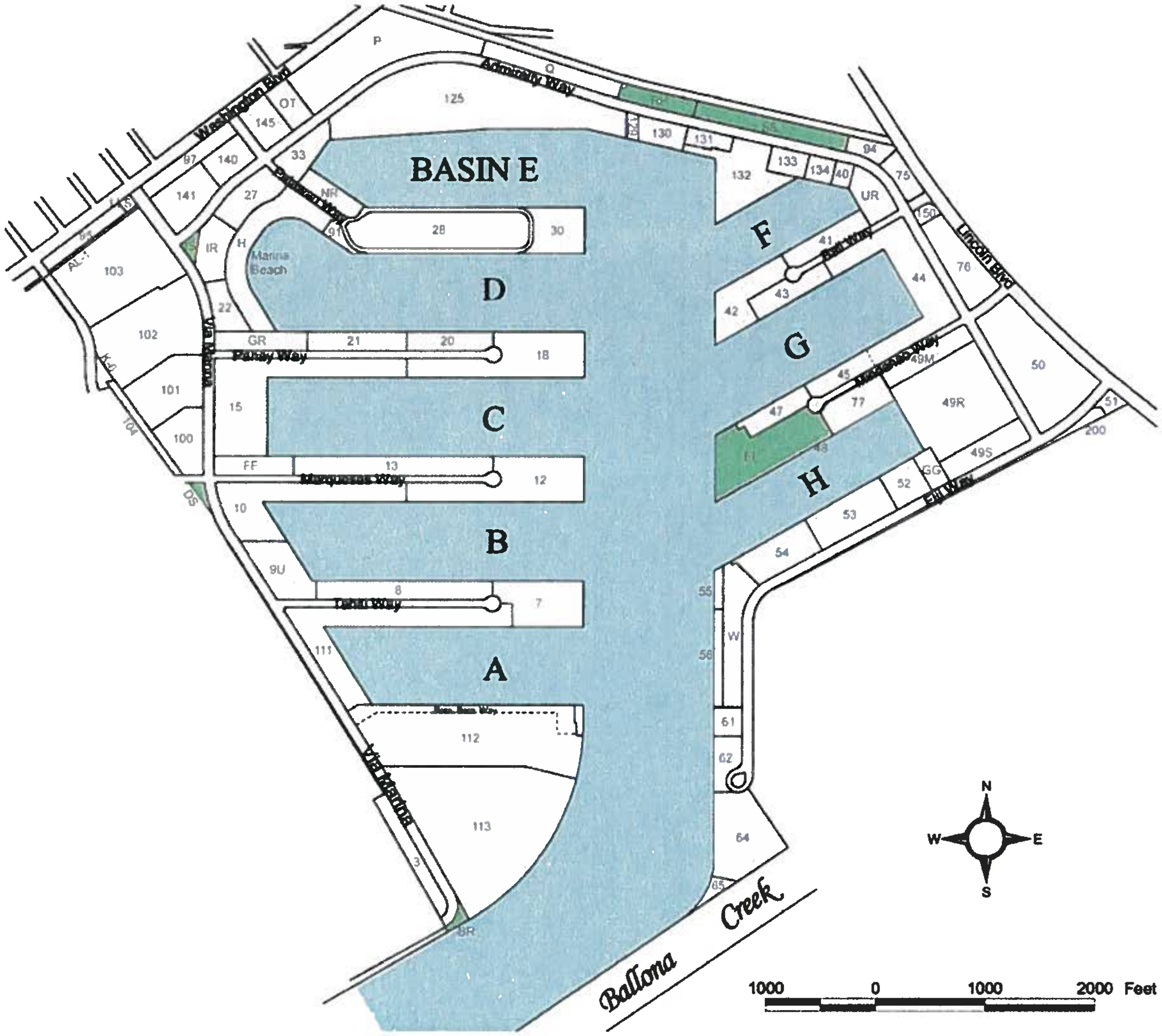
The distribution of the individual slip lengths for all of these marinas within Marina del Rey have been plotted as the cumulative distribution of these individual slip sizes for comparison, and are presented within Appendix A. Figure A-1 presents the marina distributions for the year 1999 for all the marinas in which the distribution is smaller (larger amount of shorter length slips) than the distribution for all Marina del Rey marinas when combined. Figure A-2 presents the cumulative distribution for 1999 for all the marinas in which the distribution is larger (larger amount of longer length slips) than the distribution for all Marina del Rey marinas when combined. Figure A-3 and Figure A-4 present these distributions for the year 2008, while Figure A-5 and Figure A-6 present these distributions when including the new proposed marinas.

Table 4 presents a summary of these slip length distributions for the slip length in which 50 percent of the slips do not exceed this slip length and for the slip length in which 80 percent of the slips do not exceed this slip length for comparison of each marina. Figure A-7 in Appendix A presents the slip size distribution for the combined Marina del Rey marinas in bar graph format for 1999, 2008 and proposed.

Table 1. Marina Del Rey Waterfront Slip Count

Parcel No	Marina Name	Year Built	Reconfiguration &/or Replacement	Total Number of Slips			
				Initial[5]	1999	2008	Proposed
7	Tahiti Marina	1964	No	232	214	214	214
8	The Bay Club Apts & Marina	1966	Proposed	251	231	231	207
10	Neptune Marina	1964	Proposed	203	184	184	161
12	Deauville Marina	1966	Completed 2008	465	430	216	216
13	Villa del Mar Marina	1964	Completed 1989	297	186	186	186
15	Bar Harbor Marina	1968	Proposed	253	215	215	225
18	Dolphin Marina	1968	Completed 1999	462	424	424	424
20	Panay Way Marina	1964	Completed 2006	157	145	149	149
21	Holiday Harbor Marina	1968	Proposed	218	183	183	92
28	Mariners Bay	1966	No	407	369	369	369
30	Del Rey Yacht Club	1964	Completed 1982[3]	281	287	287	287
41	Catalina Yacht Anchorage	1964	No	160	148	148	148
42/43	Marina del Rey Hotel	1964	Proposed	399	349	349	277
44[1]	Pier 44	1966	Proposed	472	232	232	143
45/47[2]	Burton Chace Park	1972	Proposed	201	332	332	188
53	The Boatyard	1964	No	113	103	103	103
54	Windward Yacht Center	1966	Completed 1997	0[6]	53	53	53
111	Marina Harbor Apts.& Anchorage	1964	Completed 2006	271	248	112	112
112	Marina Harbor Apts.& Anchorage	1970	Completed 2004	369	315	175	175
125	Marina City Club	1969	Proposed	338	316	316	273
132	California Yacht Club	1966	Completed 1985[4]	245	253	253	253
MDR Overall				5,794[7]	5,223	4,731	4,255

Note:
1 The new Parcel 44 is only a portion of the original Parcel 44. The initial slip count was for the original Parcel 44.
2 The new Parcel 45 is a portion of the original Parcel 44. The initial slip count was only for the original Baja Parcel 47.
3 56 additional slips were constructed in 1982.
4 75 additional slips were constructed in 1985.
5 The method of slip counting was different from the slip counting conducted in 1999 and thereafter. The difference between the initial slip count and the 1999 slip count does not reflect the real change in slip numbers since the initial slip count also counted end ties and inside ties as slips which were not included in the 1999, 2008 and proposed slip counts.
6 Assumed there were no slips when initially constructed.
7 Based on note 5 it is estimated that this "total number of slips" would be reduced by approximately 10% to 5,215 when deleting end ties and inside ties as slips in order to compare to the 1999, 2008 and proposed numbers.



Map March 2007 by Chris Sellers, Los Angeles County Department of Beaches and Harbors
Modified by NCI (2009) to Include Parcel 45.

Figure 1. MDR Parcel Location Map

Table 2. Average Slip Length Summary for MDR Marinas

Parcel No	Marina Name	Reconfiguration &/or Replacement	Total Number of Slips			Average Berth Length (ft)		
			1999	2008	Proposed	1999	2008	Proposed
7	Tahiti Marina	No	214	214	214	36.1	36.1	36.1
8	The Bay Club Apts & Marina	Proposed	231	231	**207**	34.6	34.6	**34.7**
10	Neptune Marina	Proposed	184	184	**161**	29.3	29.3	**31.8**
12	Deauville Marina	Completed 2008	430	216	216	31.6	45.4	45.4
13	Villa del Mar Marina	Completed 1989	186	186	186	41.8	41.8	41.8
15	Bar Harbor Marina	Proposed	215	215	**225**	32.0	32.0	**29.3**
18	Dolphin Marina	Completed 1999	424	424	424	32.1	32.1	32.1
20	Panay Way Marina	Completed 2006	145	149	149	30.2	30.3	30.3
21	Holiday Harbor Marina	Proposed	183	183	**92**	25.2	25.2	**36.4**
28	Mariners Bay	No	369	369	369	33.9	33.9	33.9
30	Del Rey Yacht Club	Completed 1982	287	287	287	39.2	39.2	39.2
41	Catalina Yacht Anchorage	No	148	148	148	26.3	26.3	26.3
42/43	Marina del Rey Hotel	Proposed	349	349	**277**	31.4	31.4	**43.6**
44	Pier 44	Proposed	232	232	**143**	27.0	27.0	**34.7**
45/47	County	Proposed	332	332	**188**	27.3	27.3	**37.0**
53	The Boatyard	No	103	103	103	30.9	30.9	30.9
54	Windward Yacht Center	Completed 1997	53	53	53	44.0	44.0	44.0
111	Marina Harbor Apts.& Anchorage	Completed 2006	248	112	112	30.8	45.5	45.5
112	Marina Harbor Apts.& Anchorage	Completed 2004	315	175	175	29.1	36.5	36.5
125	Marina City Club	Proposed	316	316	**273**	35.5	35.5	**39.4**
132	California Yacht Club	Completed 1985	253	253	253	39.4	39.4	39.4
MDR Overall			**5,223**	**4,731**	**4,255**	**32.5**	**33.9**	**36.4**

Table 3. MDR Slip Length Distributions and Wet/Dry Boat Storage

MDR Waterfront Slip Length Distributions

Berth Length	Slip Count		
	1999	2008	Proposed
20' or Less	156	158	75
21'-25'	1,406	1,073	665
26'-30'	1,403	1,183	902
31'-35'	1,011	891	857
36'-40'	624	671	799
41'-45'	230	252	357
46'-50'	197	223	265
51'-55'	59	77	90
56'-60'	98	123	139
61'-65'	21	29	39
66'-70'	4	26	35
71' -75'	2	2	4
76'-80'	6	19	20
81' or Larger	6	4	8
Total	**5,223**	**4,731**	**4,255**

MDR Dry Boat Storage

Parcel No	Dry Storage Count	
	Existing	Proposed
30	52	52
44	111	234
47	27	27
52/GG		349
77	201	0
132	122	122
Mast-up	304	304
Total	**817**	**1,088**

MDR Total Wet and Dry Boat Storage

Storage Type	Total Boat Storage	
	Existing	Proposed
Wet Storage	4,731	4,255
Dry Storage	817	1,088
Total	**5,548**	**5,343**

Table 4. Slip Length (in Feet) Distribution Summary for MDR Marinas

Parcel No	Marina Name	Reconfiguration &/or Replacement	50% of Slips Not Exceeding			80% of Slips Not Exceeding		
			1999	2008	Future	1999	2008	Future
7	Tahiti Marina	No	34	34	34	40	40	40
8	The Bay Club Apts & Marina	Proposed	35	35	35	40	40	40
10	Neptune Marina	Proposed	28	28	30	32	32	34
12	Deauville Marina	Completed 2008	30	45	45	35	50	50
13	Villa del Mar Marina	Completed 1989	40	40	40	50	50	50
15	Bar Harbor Marina	Proposed	30	30	25	40	40	35
18	Dolphin Marina	Completed 1999	30	30	30	40	40	40
20	Panay Way Marina	Completed 2006	30	30	30	35	35	35
21	Holiday Harbor Marina	Proposed	25	25	35	30	30	40
28	Mariners Bay	No	33	33	33	40	40	40
30	Del Rey Yacht Club	Completed 1982	35	35	35	50	50	50
41	Catalina Yacht Anchorage	No	25	25	25	35	35	35
42/43	Marina del Rey Hotel	Proposed	30	30	42	35	35	50
44	Pier 44	Proposed	24	24	35	34	34	38
45/47	County	Proposed	25	25	36	30	30	40
53	The Boatyard	No	30	30	30	35	35	35
54	Windward Yacht Center	Completed 1997	40	40	40	51	51	51
111	Marina Harbor Apts.& Anchorage	Completed 2006	30	40	40	35	70	70
112	Marina Harbor Apts.& Anchorage	Completed 2004	25	25	25	30	60	60
125	Marina City Club	Proposed	35	35	35	40	40	45
132	California Yacht Club	Completed 1985	40	40	40	45	45	45
MDR Overall			**30**	**30**	**35**	**40**	**40**	**44**

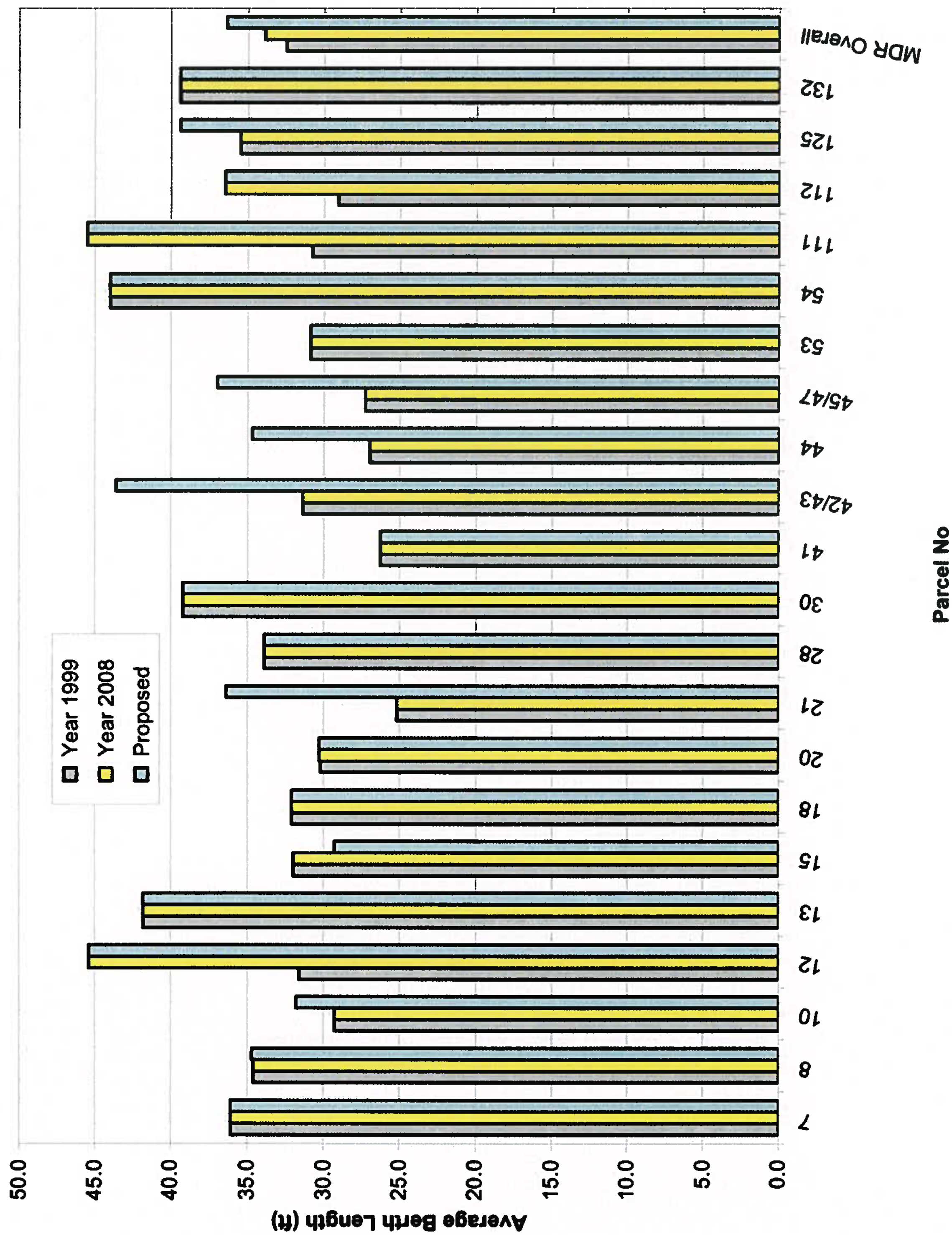


Figure 2. Average Slip Length Summary for MDR Marinas

V COMPARISON OF MARINA DEL REY BOAT BERTH DISTRIBUTIONS TO OTHER MARINAS

In order to gauge how the existing Marina del Rey combined marinas (2008) and the proposed Marina del Rey combined marinas (proposed), when including the currently proposed reconfigurations, compare to other marinas, information on boat berth slip distributions was obtained for 21 other southern and northern California marinas, as well as for 2 Honolulu marinas. Table 5 (two pages) lists 15 other southern California marinas, 6 other northern California marinas, and 2 other Honolulu marinas. It provides the marinas total number of slips and average slip length for the original constructed marina, with date of construction when known, and for the reconstructed marina, if it was either reconstructed or is proposed for reconstruction, with its date when known. This table illustrates that the Marina del Rey combined marinas for both the existing condition (2008) and the proposed condition (proposed) fall within the middle of the listed other marinas with 12 of the 23 other marinas having a larger average slip length for the proposed reconfigured condition.

Table 5 also shows that when taking the total slips and average slip length for the 13 other marinas which list both before and after (or existing and proposed) reconfiguration that the before slip count of 8,903 with an average slip length of 33.5 feet changes to an after slip count of 8,293 with an average slip length of 38.0 feet. When comparing this to the existing and proposed Marina del Rey numbers Table 6 shows that Marina del Rey's proposed average slip length is 36.4 feet while the 13 other marinas after reconfiguration average slip length is 38.0 feet, a 7.4 percent increase in average slip length for Marina del Rey versus a 13.4 percent increase for the 13 other marinas.

Table 7 presents the berth length distributions for 22 of the other marinas listed in Table 5. There was insufficient data to include the Peter's Landing Marina in Huntington Beach, for evaluating its berth length distribution. For the other 22 marinas only the newest marina configuration was used (either existing when not reconfigured or the reconfigured or currently proposed reconfigured). This table presents berth lengths in five foot increments from 30 feet to 70 feet with the 30 feet increment including all berths of 30 feet or less and the 70 feet increment including all berths more than 70 feet in length. This table clearly shows that both the Marina del Rey existing condition (2008) and proposed condition almost always have a lower distribution, or in some instances equal distribution, for all berth lengths of 41 feet or larger when compared to the average berth length distribution for all of the listed other marinas. The Marina del Rey proposed distribution for berth lengths of 31 feet to 40 feet are about equal to the average distribution, whereas even the Marina del Rey proposed distribution for berth lengths equal to or less than 30 feet in length is still 5 percent above the average distribution (38.5% vs. 33.6%). This table illustrates that even when Marina del Rey incorporates all of the current eight proposed marina reconfigurations that the entire Marina del Rey berth length distribution is less than (smaller berth lengths) the average berth length distribution shown in Table 7.

Appendix B presents the distribution of the individual slip lengths for all of the other marinas listed in Table 7 as compared to the distribution for the Marina del Rey combined marinas for both the existing (2008) condition and the proposed condition. Figure B-1 through Figure B-5 are plots of the cumulative distributions of the individual slip sizes for Marina del Rey versus these other marinas listed in Table 7. As an example Figure B-6 presents a bar graph of the slip length distribution for the Marina del Rey existing (2008) combined marinas versus the Sunroad Marina in San Diego Bay. This bar graph clearly illustrates that Marina del Rey currently has a significantly higher percentage of smaller size slips than the Sunroad Marina.

Table 5. Comparison of Average Slip Length for MDR and Other Marinas

Marinas	Total Slips	Average Slip Length (Feet)
Marina del Rey		
2008	**4,731**	**33.9**
Proposed	**4,255**	**36.4**
Average of 13 Other Marinas with Reconstructed Slips		
Before	**8,903**	**33.6**
After	**8,293**	**38.0**
1. Sunroad Marina, San Diego[1]		
1987	527	42.2
2. CYM-Chula Vista, San Diego[2]		
1990	354	36.1
3. Cabrillo Isle Marina, San Diego[2]		
1976	406	38.0
2005	404	39.4
4. Dana Point Marina, Dana Point		
1969[3]	1,467	33.0
Proposed[1]	1,285	33.4
5. Sunset Aquatic Park, Huntington Beach[3]		
Before Reconfiguration	252	30.5
After Reconfiguration	237	32.8
6. Peter's Landing Marina, Huntington Beach[3]		
Before Reconfiguration	300	39.0
After Reconfiguration	286	40.5
7. Long Beach Downtown Marinas, Long Beach[2]		
Before Reconfiguration	1,769	35.9
After Reconfiguration	1,679	36.7
8. Alamitos Bay Marina, Long Beach[2]		
Existing	1,997	31.5
Proposed	1,647	35.8
9. Cabrillo Marina, San Pedro[2]		
Mid 1980's	882	35.6
10. Cabrillo Way Marina, San Pedro		
Existing[3]	625	34.3
Proposed[2]	697	45.6
11. Port Royal, Redondo Beach[2]		
1960	336	29.8

Source: [1] Noble Consultants, Inc. (NCI), Construction Drawings.
[2] County of Los Angeles, Department of Beaches and Harbors.
(NCI calculated from data received from various marina developers.)
[3] Williams-Kuebelbeck & Associates (2004) Study.
[4] Berthing Study, California Association of Harbor Masters and Port Captains, March 2006, excerpt on San Francisco Marina facilities.

Table 5. Comparison of Average Slip Length for MDR and Other Marinas (Cont.)

Marinas	Total Slips	Average Slip Length (Feet)
Marina del Rey		
2008	**4,731**	**33.9**
Proposed	**4,255**	**36.4**
Average of 13 Other Marinas with Reconstructed Slips		
Before	**8,903**	**33.6**
After	**8,293**	**38.0**
12. Anacapa Isle Marina, Oxnard[2]		
1974	504	30.2
1987	389	33.4
13. Bahia Marina, Oxnard[2]		
1973	70	38.0
2009	82	52.8
14. Peninsula Marina, Oxnard[2]		
1970	341	33.7
2009	292	47.3
15. Ventura Isle Marina, Ventura[2]		
1973	625	31.5
1992	519	38.8
16. Treasure Isle Marina, San Francisco[2]		
1950	105	31.5
2009	403	41.8
17. Ballena Isle Marina, Alameda[2]		
1974	442	34.5
2010	373	43.8
18. Pier 39, San Francisco[4]		
Existing	299	41.4
19. San Francisco Marina, San Francisco[4]		
Existing	657	30.4
20. South Beach Harbor, San Francisco[4]		
Existing	757	34.9
21. Martinez Marina, Martinez[2]		
1968	340	32.6
22. Ko Olina Marina, Honolulu[2]		
2002	336	45.4
23. Iroquois Point, Honolulu[2]		
1970	34	32.4

Source: [1] Noble Consultants, Inc. (NCI), Construction Drawings.
[2] County of Los Angeles, Department of Beaches and Harbors.
(NCI calculated from data received from various marina developers.)
[3] Williams-Kuebelbeck & Associates (2004) Study.
[4] Berthing Study, California Association of Harbor Masters and Port Captains, March 2006, excerpt on San Francisco Marina facilities.

Table 6. Marina del Rey Slips vs. 13 Other Marina Slips

Marina	Marina del Rey	13 Other Marinas
Before Total Slips	4,731	8,903
After Total Slips	4,255	8,293
Percentage Reduction	-10.1%	-6.9%
Before Average Slip Length	33.9′	33.6′
After Average Slip Length	36.4′	38.0′
Percentage Increase	+7.4%	+13.4%

Table 7. Berth Length Distributions for MDR and Other Marinas

Marinas		Slip Length										
		<=30'	31'-35'	36'-40'	41'-45'	46'-50'	51'-55'	56'-60'	61'-65'	66'-70'	>70'	Total
Marina del Rey	**2008**	**51.0%**	**18.8%**	**14.2%**	**5.3%**	**4.7%**	**1.6%**	**2.6%**	**0.6%**	**0.5%**	**0.5%**	**100%**
Marina del Rey	**Proposed**	**38.6%**	**20.1%**	**18.8%**	**8.4%**	**6.2%**	**2.1%**	**3.3%**	**0.9%**	**0.8%**	**0.7%**	**100%**
Sunroad Marina, San Diego	1987	8.3%	17.5%	24.3%	27.3%	17.3%	3.8%	0.0%	1.5%	0.0%	0.0%	100%
CYM-Chula Vista, San Diego	1990	31.1%	33.9%	12.4%	12.1%	5.1%	4.5%	0.0%	0.6%	0.0%	0.3%	100%
Cabrillo Isle Marina, San Diego	2005	17.6%	42.8%	11.1%	10.9%	10.4%	0.0%	1.2%	0.5%	1.5%	4.0%	100%
Dana Point Marina, Dana Point	Proposed1	59.6%	15.6%	13.0%	4.1%	1.5%	1.6%	2.6%	1.1%	0.8%	0.3%	100%
Sunset Aquatic Park, Huntington Beach	After Reconfig.	46.8%	43.9%	3.0%	2.1%	4.2%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Long Beach Downtown Marinas, Long Beach	After Reconfig.	33.1%	26.7%	24.2%	9.2%	4.6%	0.0%	2.1%	0.0%	0.0%	0.0%	100%
Alamitos Bay Marina, Long Beach	Proposed	39.3%	19.1%	23.1%	5.9%	8.3%	0.2%	2.2%	0.0%	0.8%	0.9%	100%
Cabrillo Marina, San Pedro	Mid 1980's	57.9%	0.0%	31.9%	0.0%	6.5%	0.0%	2.7%	0.0%	0.8%	0.2%	100%
Cabrillo Way Marina, San Pedro	Proposed	18.8%	13.6%	15.5%	17.5%	11.0%	8.5%	6.3%	0.0%	4.3%	4.4%	100%
Port Royal, Redondo Beach	1960	81.5%	7.7%	8.0%	0.0%	0.0%	1.5%	0.0%	0.6%	0.3%	0.3%	100%
Anacapa Isle Marina, Oxnard	1987	52.9%	22.1%	7.7%	7.5%	6.7%	0.0%	3.1%	0.0%	0.0%	0.0%	100%
Bahia Marina, Oxnard	2009	0.0%	0.0%	19.5%	24.4%	24.4%	1.2%	22.0%	1.2%	1.2%	6.0%	100%
Peninsula Marina, Oxnard	2009	2.7%	13.4%	21.2%	18.2%	15.8%	12.7%	7.5%	4.5%	2.1%	2.0%	100%
Ventura Isle Marina, Ventura	1992	30.4%	19.5%	18.1%	12.7%	10.4%	4.0%	3.5%	1.2%	0.2%	0.0%	100%
Treasure Isle Marina, San Francisco	2009	25.8%	15.6%	15.9%	15.4%	11.7%	0.0%	9.9%	0.0%	5.7%	0.0%	100%
Ballena Isle Marina, Alameda	2010	0.8%	29.2%	22.8%	0.0%	36.5%	0.0%	8.3%	0.0%	1.3%	1.1%	100%
Pier 39, San Francisco	Existing	0.7%	0.0%	66.6%	8.0%	21.4%	0.0%	2.3%	0.0%	0.0%	1.0%	100%
San Francisco Marina, San Francisco	Existing	63.7%	13.7%	11.4%	3.8%	2.6%	0.0%	4.0%	0.0%	0.0%	0.9%	100%
South Beach Harbor, San Francisco	Existing	32.8%	26.4%	13.2%	13.2%	13.2%	0.0%	0.5%	0.0%	0.3%	0.4%	100%
Martinez Marina, Martinez	1968	45.1%	34.4%	13.8%	6.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Ko Olina Marina, Honolulu	2002	20.5%	11.3%	17.0%	9.5%	20.5%	1.8%	8.9%	3.0%	4.5%	3.0%	100%
Iroquois Point, Honolulu	1970	47.1%	35.3%	17.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Average		**33.6%**	**20.0%**	**18.5%**	**9.3%**	**10.1%**	**1.8%**	**3.9%**	**0.7%**	**1.0%**	**1.1%**	**100%**

VI MARINA DEL REY RECONFIGURED MARINAS AND PROPOSED MARINA RECONFIGURATIONS

Both the Del Rey Yacht Club (Parcel 30) and the California Yacht Club (Parcel 132) were reconfigured with additional rows of boat berth slips added into the main channel prior to 1999 as shown in Table 1. Also the Villa del Mar Marina (Parcel 13), the Dolphin Marina (Parcel 18) and the Windward Yacht Center (Parcel 54) were reconfigured either prior to or by 1999. The following four marinas were reconfigured after the year 1999:

- Parcel 12: Deauville Marina (completed 2008)
- Parcel 20: Panay Way Marina (completed 2006)
- Parcel 111: Marina Harbor Apts. & Anchorage (completed 2006)
- Parcel 112: Marina Harbor Apts. & Anchorage (completed 2004)

Figure C-1 in Appendix C presents the distribution of the individual slip lengths for these four marinas for both before their reconfiguration (1999) and after their reconfiguration (2008) as compared to the distribution for the Marina del Rey combined marinas for the existing (2008) condition. Figure C-2 through Figure C-5 present the slip size distribution for Parcels 12, 20, 111 and 112, respectively in bar graph format for 1999 (prior to reconfiguration) versus 2008 (after reconfiguration).

The current Marina del Rey marinas proposed for reconfiguration consist of the following eight marinas (see Table 1):

- Parcel 8: The Bay Club Apts. & Marina (231 slips to 207 slips)
- Parcel 10: Neptune Marina (184 slips to 161 slips)
- Parcel 15: Bar Harbor Marina (215 slips to 225 slips)
- Parcel 21: Holiday Harbor Marina (183 slips to 92 slips)
- Parcel 42/43: Marina del Rey Hotel (349 slips to 277 slips)
- Parcel 44: Pier 44 (232 slips to 143 slips)
- Parcel 45/47: Burton Chace Park (332 slips to 188 slips)
- Parcel 125: Marina City Club (316 slips to 273 slips)

Of the above eight proposed marina reconfigurations Parcel 15 has already received final approval while the other seven are in various stages of the approval process.

Figure C-6 and Figure C-7 present the distribution of the individual slip lengths for the current eight proposed marina reconfigurations for both their existing (2008) configuration and their proposed reconfiguration as compared to the distribution for the Marina del Rey combined marinas for the existing (2008) condition. Figure C-8 through Figure C-15 present the slip size distribution for these eight marinas, respectively in bar graph format for 2008 (existing configuration) versus proposed (proposed reconfiguration).

Table 8 presents the berth length distributions for the 7 reconfigured marinas since 1989 and the proposed 8 marinas to be reconfigured as shown in Table 1. The Del Rey Yacht Club (Parcel 30) and the California Yacht Club (Parcel 132) were not included since both of these facilities received permission to add additional slips into the main channel versus being reconfigured, and these additional slips were added prior to 1989. Table 8 presents berth lengths in five foot increments from 30 feet to 70 feet with the 30 feet increment including all berths of 30 feet or less and the 70 feet increment including all berths of more than 70 feet in length. This table also includes the berth length distributions for all of the listed 15 reconfigured and proposed reconfigured marinas when combined (Averaged-bottom row of table) as well as for all of the marinas listed in Table 1 for Marina del Rey for both the existing condition (2008) and the proposed reconfigured condition (Proposed) (top 2 rows of table). It shows that the averaged berth length distribution for the listed 15 reconfigured and proposed reconfigured marinas is almost the same as for the proposed condition for all of the Marina del Rey marinas.

Table 8. Berth Length Distributions for Reconfigured and Proposed Reconfigured MDR Marinas

Parcel No	Marina Name	Reconfiguration &/or Replacement	Slip Length <=30'	31'-35'	36'-40'	41'-45'	46'-50'	51'-55'	56'-60'	61'-65'	66'-70'	>70'	Total
Overall	Marina del Rey	2008	51.0%	18.8%	14.2%	5.3%	4.7%	1.6%	2.6%	0.6%	0.5%	0.5%	100%
Overall	Marina del Rey	Proposed	38.5%	20.2%	18.8%	8.4%	6.2%	2.1%	3.3%	0.9%	0.8%	0.7%	100%
8	Bay Club Apts & Marina	Proposed	29.5%	40.6%	18.8%	7.2%	3.4%	0.0%	0.5%	0.0%	0.0%	0.0%	100%
10	Neptune Marina	Proposed	58.4%	28.0%	13.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
12	Deauville Marina	Completed 2008	0.0%	13.9%	24.5%	26.9%	20.4%	8.3%	3.2%	0.0%	2.8%	0.0%	100%
13	Villa del Mar Marina	Completed 1989	0.0%	17.7%	39.2%	19.4%	19.4%	0.0%	0.0%	4.3%	0.0%	0.0%	100%
15	Bar Harbor Marina	Proposed	68.4%	26.7%	4.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
18	Dolphin Marina	Completed 1999	62.7%	9.7%	9.2%	6.1%	4.2%	2.6%	5.2%	0.2%	0.0%	0.0%	100%
20	Panay Way Marina	Completed 2006	71.8%	15.4%	1.3%	11.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
21	Holiday Harbor Marina	Proposed	28.3%	30.4%	22.8%	8.7%	9.8%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
42/43	Marina del Rey Hotel	Proposed	0.7%	29.2%	19.5%	23.8%	14.4%	1.4%	3.6%	3.6%	3.6%	0.0%	100%
44	Pier 44	Proposed	47.6%	14.7%	27.3%	0.0%	7.7%	0.0%	1.4%	0.0%	0.0%	1.4%	100%
45/47	Burton Chace Park	Proposed	33.5%	2.1%	51.6%	10.1%	0.5%	0.0%	0.0%	0.5%	0.0%	1.6%	100%
54	Windward Yacht Center	Completed 1997	7.5%	0.0%	43.4%	13.2%	9.4%	18.9%	7.5%	0.0%	0.0%	0.0%	100%
111	Marina Harbor Anchorage	Completed 2006	42.9%	0.9%	15.2%	0.0%	7.1%	0.0%	10.7%	0.0%	13.4%	9.8%	100%
112	Marina Harbor Anchorage	Completed 2004	58.3%	6.3%	12.6%	0.0%	0.0%	0.0%	12.0%	5.7%	1.7%	3.4%	100%
125	Marina City Club	Proposed	30.8%	22.0%	14.7%	12.8%	6.6%	7.3%	4.4%	0.0%	0.0%	1.5%	100%
Averaged for Reconfigured and Proposed Reconfigured			37.5%	18.1%	19.2%	10.0%	6.8%	2.2%	3.2%	1.0%	1.2%	0.9%	100%

VII BOAT BERTH SLIP DEMAND

Marina del Rey marina slip vacancy rates were analyzed from data provided by the Los Angeles County Department of Beaches and Harbors (DBH) for those months and years in which we had a complete data set consisting of both slip vacancy count and total available number of slips, both for each slip length category. Then if necessary this data was adjusted to account for the redevelopment of marina parcels during the month in question. Sufficient data was provided to evaluate slip vacancy rates for the years 2003 through 2008. However since each year was based on a different number of months of the required data, each year is plotted as a single vacancy rate based on the average of the available months for each year. Figure 3 presents the results of the analyzed vacancy rates from 2003 through 2008 for the following four slip length categories:

- 18 feet to 25 feet
- 26 feet to 35 feet
- 36 feet to 50 feet
- Over 50 feet

This figure shows that boat slip lengths in the 36 feet to 50 feet and in the over 50 feet categories have the lowest vacancy rates which are in the one-half to two percent vacancy rate range, while slip lengths of 18 feet to 25 feet have the highest vacancy rates which are in the four to eight percent range, and slip lengths of 26 feet to 35 feet are in the two to four percent vacancy rate range. In addition, other reports such as the Williams-Kuebelbeck (2004) report, "Marina del Rey-Boat Slip Sizing and Pricing Study Update" have reported that based on interviews with southern California marina owners and managers the major portion of vacancies are in the smaller slip sizes of under 30 feet in length, and that when analyzing slip vacancy rates for Marina del Rey from 2001 through 2003 the majority of vacancies were in slip lengths of 35 feet and under as market trends had indicated in prior analysis, and which is supported in Figure 3.

The reduction of boat berth slip lengths of 30 feet and less during the replacement and reconfiguration of marinas within Marina del Rey is being offset with the proposed increase from 817 to 1088 in dry boat storage spaces as shown in Table 3. In addition, there is a portion of these smaller boats that are now being stored on trailers offsite of Marina del Rey that will be launched from boat launch ramp facilities when used.

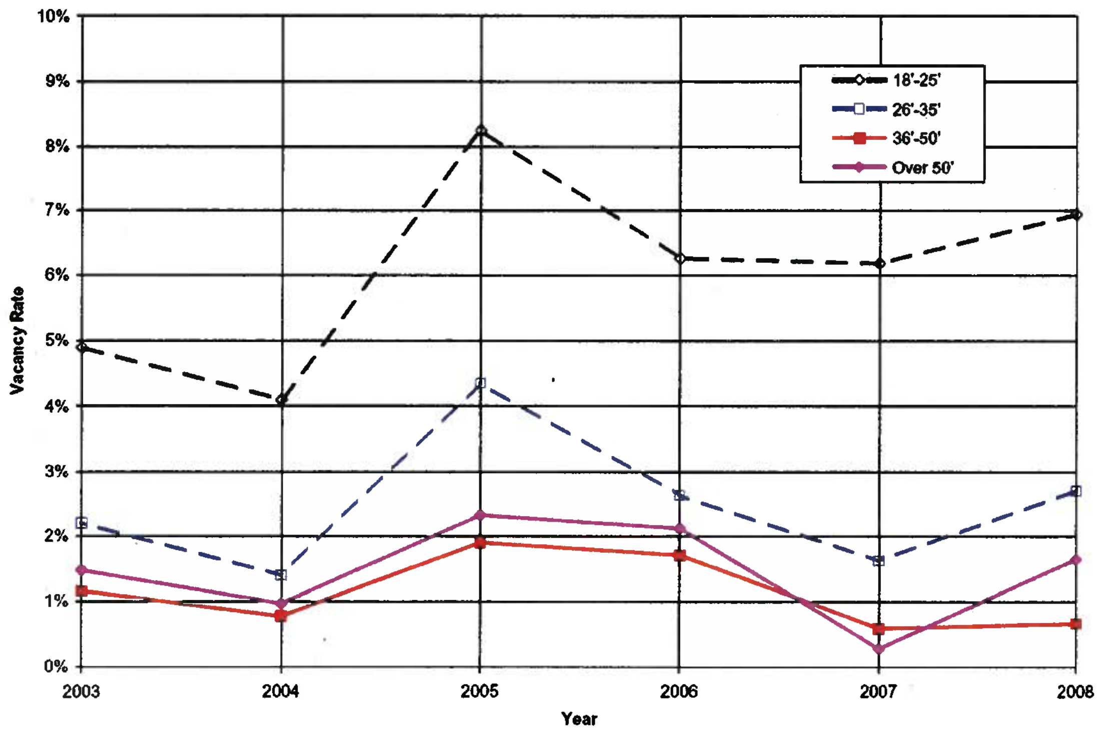


Figure 3. Marina del Rey Slip Vacancy Rates

Also, the national boat registration, which includes documented U.S. Coast Guard vessels, was available from the "2007 Recreational Boating Statistical Abstract" published by the National Marine Manufacturers Association for vessel length categories for the years 1996 through 2007.

Table 9 presents these vessel registrations for the following vessel length categories:

- Under 16 feet
- 16 feet to less than 26 feet
- 26 feet to less than 40 feet
- 40 feet and larger

In Table 10 we used 1996 as the base year and then calculated the percentage change for each year and vessel length category as compared to the 1996 base year. Review of the percentage changes in vessel registration for the year 2007 illustrates that the largest percentage changes occurred for vessels of 26 feet to less than 40 feet and for 40 feet and larger. Even though the vessel length category did not sub-divide the 26 feet to less than 40 feet and the 40 feet and larger categories, review of this table would suggest that the larger size vessels have the higher percentage increase in vessel registrations.

Table 9. Boat Registration Number Change by Size Categories

Year	Under 16'	16' to less than 26'	26' to less than 40'	40' and larger	Total
2007	5,098,637	6,233,126	555,708	79,156	11,966,627
2006	5,068,951	6,174,973	482,536	75,959	11,802,419
2005	5,221,276	6,221,554	478,869	77,029	11,998,728
2004	5,279,622	6,054,768	469,159	75,234	11,878,783
2003	5,376,481	6,004,243	458,356	69,081	11,908,161
2002	5,440,271	5,910,367	500,388	67,662	11,918,688
2001	5,708,068	5,868,223	446,186	67,516	12,089,993
2000	5,447,271	5,679,180	428,083	64,235	11,618,769
1999	5,636,128	5,678,516	418,018	58,407	11,791,069
1998	5,665,230	5,514,957	401,086	56,139	11,637,412
1997	5,767,114	5,380,784	388,471	54,794	11,591,163
1996	5,073,753	5,006,527	317,082	47,039	10,444,401

Table 10. Boat Registration Number Change by Size Categories

Year	Under 16'	16' to less than 26'	26' to less than 40'	40' and larger	Total
2007	0.5%	24.5%	75.3%	68.3%	14.6%
2006	-0.1%	23.3%	52.2%	61.5%	13.0%
2005	2.9%	24.3%	51.0%	63.8%	14.9%
2004	4.1%	20.9%	48.0%	59.9%	13.7%
2003	6.0%	19.9%	44.6%	46.9%	14.0%
2002	7.2%	18.1%	57.8%	43.8%	14.1%
2001	12.5%	17.2%	40.7%	43.5%	15.8%
2000	7.4%	13.4%	35.0%	36.6%	11.2%
1999	11.1%	13.4%	31.8%	24.2%	12.9%
1998	11.7%	10.2%	26.5%	19.3%	11.4%
1997	13.7%	7.5%	22.5%	16.5%	11.0%
1996	0.0%	0.0%	0.0%	0.0%	0.0%

VIII CALIFORNIA DEPARTMENT OF BOATING AND WATERWAYS' MARINA DESIGN GUIDELINES

The first marina dock guidelines published by the California Department of Boating and Waterways (DBAW) that presented dimensional layout criteria for floating dock marinas was the January 1980 "Layout and Design Guidelines for Small Craft Berthing Facilities". DBAW republished this guideline over the years without including a new date. Then in July 2005 DBAW completely replaced this guideline with the currently available guidelines which is posted on their website and is titled, "Layout and Design Guidelines for Marina Berthing Facilities". Figure 4 plots the DBAW clear width criteria based on single berth slips for berth lengths from 20 feet to 80 feet, for both the 1980 and 2005 guidelines, and for both power boats and sail boats. This figure indicates that there has been no change in the DBAW criteria from 1980 to 2005 since the minor differences in the figure are simply numerical rounding differences in the equations now used in the 2005 guidelines.

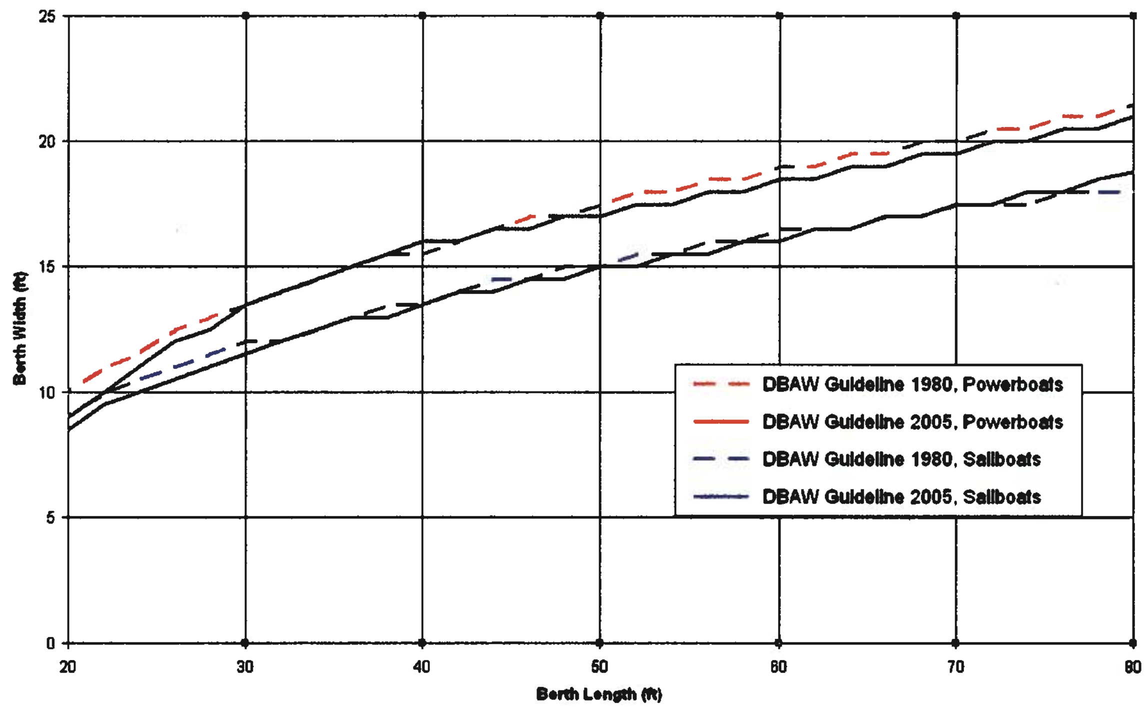


Figure 4. DBAW Slip Clear Width Guidelines Based on Single Berths

Table 11 tabulates other dock dimensional criteria for the 1980 and 2005 DBAW guidelines. This table presents the minimum finger dock width criteria and the fairway width criteria for boat maneuvering during berthing between adjacent dock headwalks containing boat berths. Again, this table shows no change between the two guidelines other than the 2005 guidelines increases the minimum width criteria for the longer finger docks specified in the 2005 guidelines, and the 2005 guidelines also now includes criteria pertaining to ADAAG 15.2 and ADA-ABA 1003 “Accessible Boating Facilities”.

Table 11. DBAW Guidelines for Dock Fingerfloat Widths and Fairway Widths

Marina Dock Fingerfloat Widths

DBAW Guidelines 1980		DBAW Guidelines 2005	
Length	Min. Width	Length	Min. Width
Up to 20'	2.5'	Below 20'	2.5'
21'-35'	3.0'	20' - 35'	3.0'
36'-60'	4.0'	36' - 59'	4.0'
61' & up	5.0'	60' - 79'	5.0'
		80' & Over	6.0'
		120' & Over	8.0'
		Accessible Fingerfloats	5.0'

Marina Fairway Widths

DBAW Guidelines 1980		DBAW Guidelines 2005	
w/o Side Ties	w/ Side Ties	w/o Side Ties	w/ Side Ties
1.75 L_b	$1.50L_{bb}$	1.75 L_b	$1.50L_{bb}$

L_b = length of longest berth perpendicular to the fairway

L_{bb} = length of longest boat side-tied parallel to the fairway

Prior to the DBAW January 1980 guidelines numerous other marina and small craft harbor technical references were available that contained various recommendations. Several of these references have been included in the reference section of this report. In the review of marinas dating back to the late 1950s and early 1960s the marina dock layout criteria varied depending on the site conditions, local market, developer and engineer. In numerous cases the criteria was less than that presented by DBAW while in other cases the criteria was similar to that presented by DBAW.

Detailed data was obtained from both the Marina del Rey dock masters and the Department of Beaches and Harbors pertaining to the existing slip clear widths versus slip lengths for single berthed and double berthed boats, for many of the Marina del Rey marinas. This data for the single berthed boats was plotted and is presented in Figure 5 and Figure 6. Figure 5 presents those marina parcels and the Sunroad Marina in San Diego that generally but not always meets the DBAW criteria for power boats, while Figure 6 presents those marina parcels that generally are between the DBAW power and sail boat criteria, but in many cases are even under the sail boat criteria.

Review of Figure 6 shows that the marinas not meeting the DBAW slip clear width criteria for power boats, and in many cases not even for sail boats, were for marinas constructed in the 1960s/1970s that have not been reconstructed. Parcel 18 (Dolphin Marina) and Parcel 20 (Panway Marina) were only reconstructed in 1999 and 2006 without being reconfigured, and Parcel 132 (California Yacht Club) only included the added slips in 1985 within the main channel. Figure 5 shows that two of the marinas constructed in the 1960s generally meet the DBAW power boat criteria, but not always. These two figures illustrate that many of the existing marina boat berth slips currently do no meet 50 percent of the power boat and 50 percent of the sail boat slip clear width criteria. Therefore, when upcoming marinas are reconfigured in order to meet this criteria it will result in the loss of some slips even before increasing the average length of the slip.

Figure 7 presents the available number of boat berths per acre of available water area per average berth slip length when meeting the DBAW criteria for slip clear width, fairway width, finger dock width and main walkway width. This is based on meeting 50 percent power boat slips clear width criteria and 50 percent sail boat slip clear width criteria. When utilizing this curve for the existing average berth length of 33.9 feet for Marina del Rey (see Table 2 for 2008) and comparing it to the proposed average berth length of 36.4 feet for Marina del Rey it shows that there would be a reduction from 40 berths per acre to 34 berths per acre, or a 15 percent reduction in boat berths. Table 2 shows a reduction in total number of slips from 4,731 to 4,255, which is a 10 percent reduction in boat berths. Therefore, a reduction in the total number of slips is necessary in order to increase the average slip length and to meet the DBAW marina berthing guidelines.

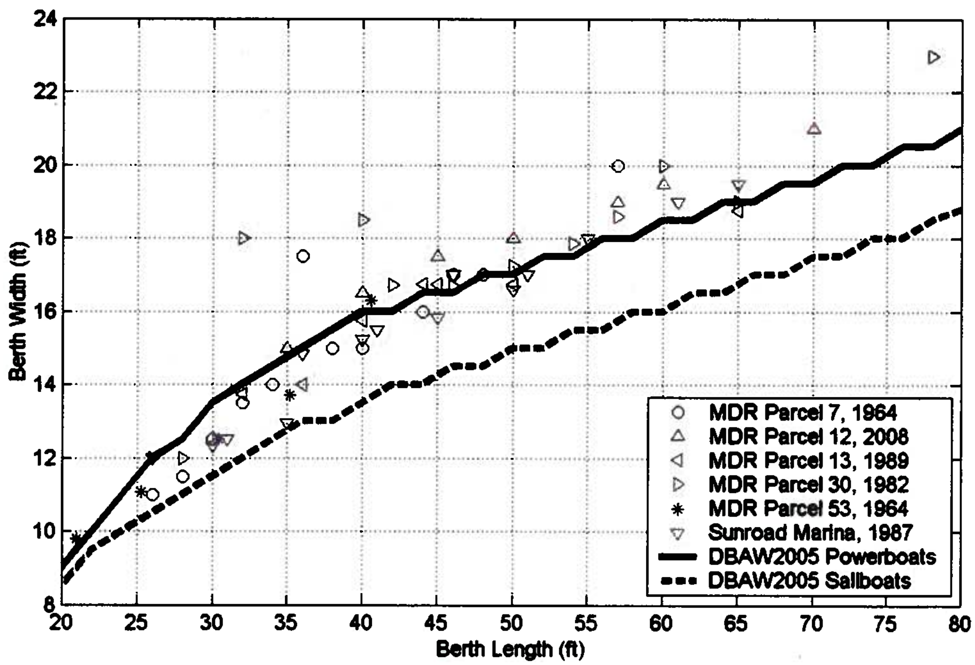


Figure 5. Slip Widths for MDR Parcels Similar to DBAW Powerboat Criteria

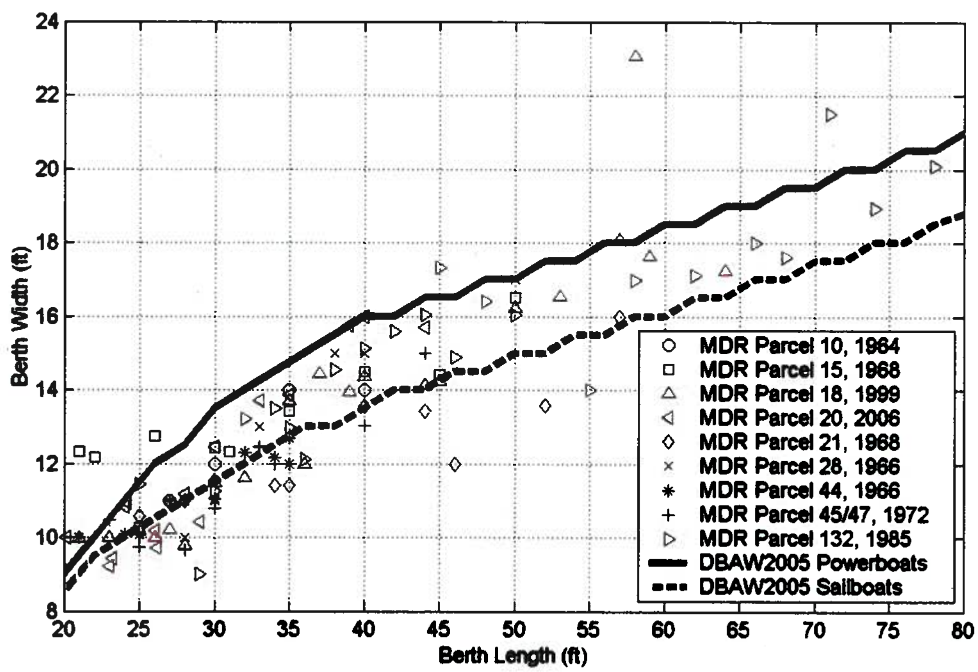


Figure 6. Slip Widths for MDR Parcels Narrower than DBAW Powerboat Criteria

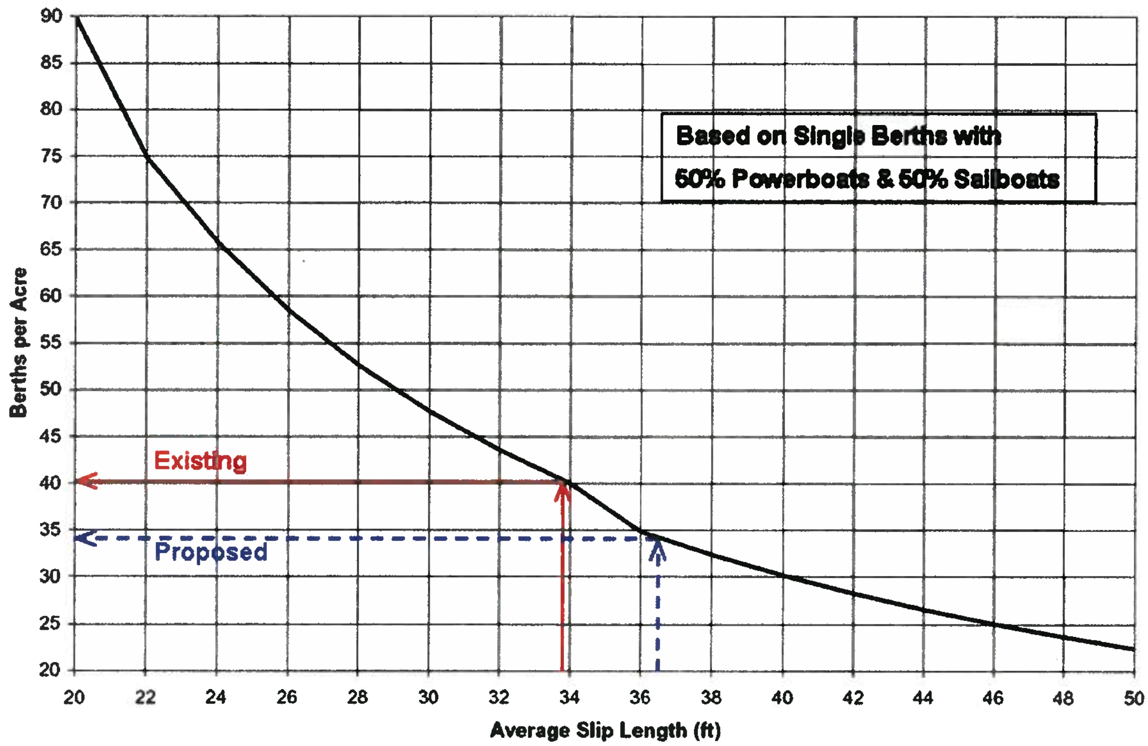


Figure 7. Boat Berths per Acre vs. Slip Length

IX BOAT INDUSTRY VESSEL LENGTH VERSUS BEAM

Numerous boating manufacturers references were reviewed for both power and sail boats from 1960 through 2008 in order to obtain data on vessel length versus vessel beam. References included various past boating magazines, journals and publications, boating data within Noble Consultants files, and numerous internet searches. This data has been plotted in Figure 8 and inFigure 9, and includes a best fit curve line for the 1960's data, the 1983 data and the 2000's data in Figure 8 for power boats, and includes a best fit curve line for the 1960's data and 2000's data in Figure 9 for sail boats. Figure 8 shows that the beam width for vessels steadily increases, on average, for power boats of 48 feet and longer when comparing today's vessel with the 1960's vessel, and for power boats of 40 feet and longer when comparing today's vessel with the 1983's vessel. This average beam width increase is almost four feet for an 80 feet long vessel and is a one foot increase for a 55 feet long vessel when comparing today's vessel with the 1960's vessel. When comparing sail boats, Figure 9 shows an average beam width increase of one to two feet for all vessel lengths shown (25 feet to 65 feet).

These two figures clearly show that boat beams have increased by an average of about two feet for sail boats berthed at Marina del Rey and up to four feet for power boats since the 1960's. Therefore, all presently proposed and future proposed reconfigured Marina del Rey marinas should conform to the DBAW slip clear width guidelines for both power boats and sail boats. This will result in a reduction of the total number of slips for the reconfigured slips for marinas not currently meeting the DBAW criteria.

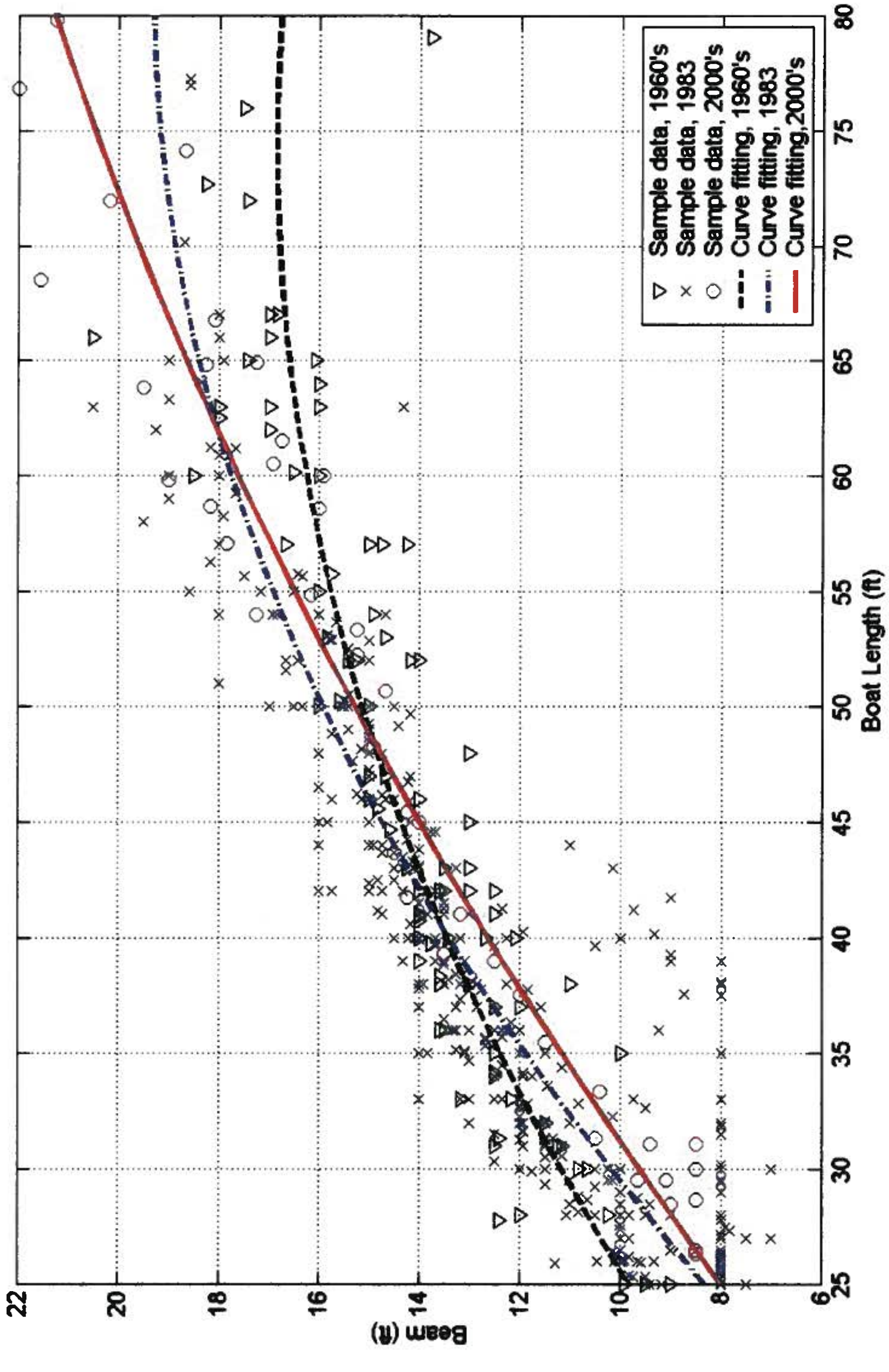


Figure 8. Boat Beam vs. Boat Length Variation for Power Boats 1960-2008

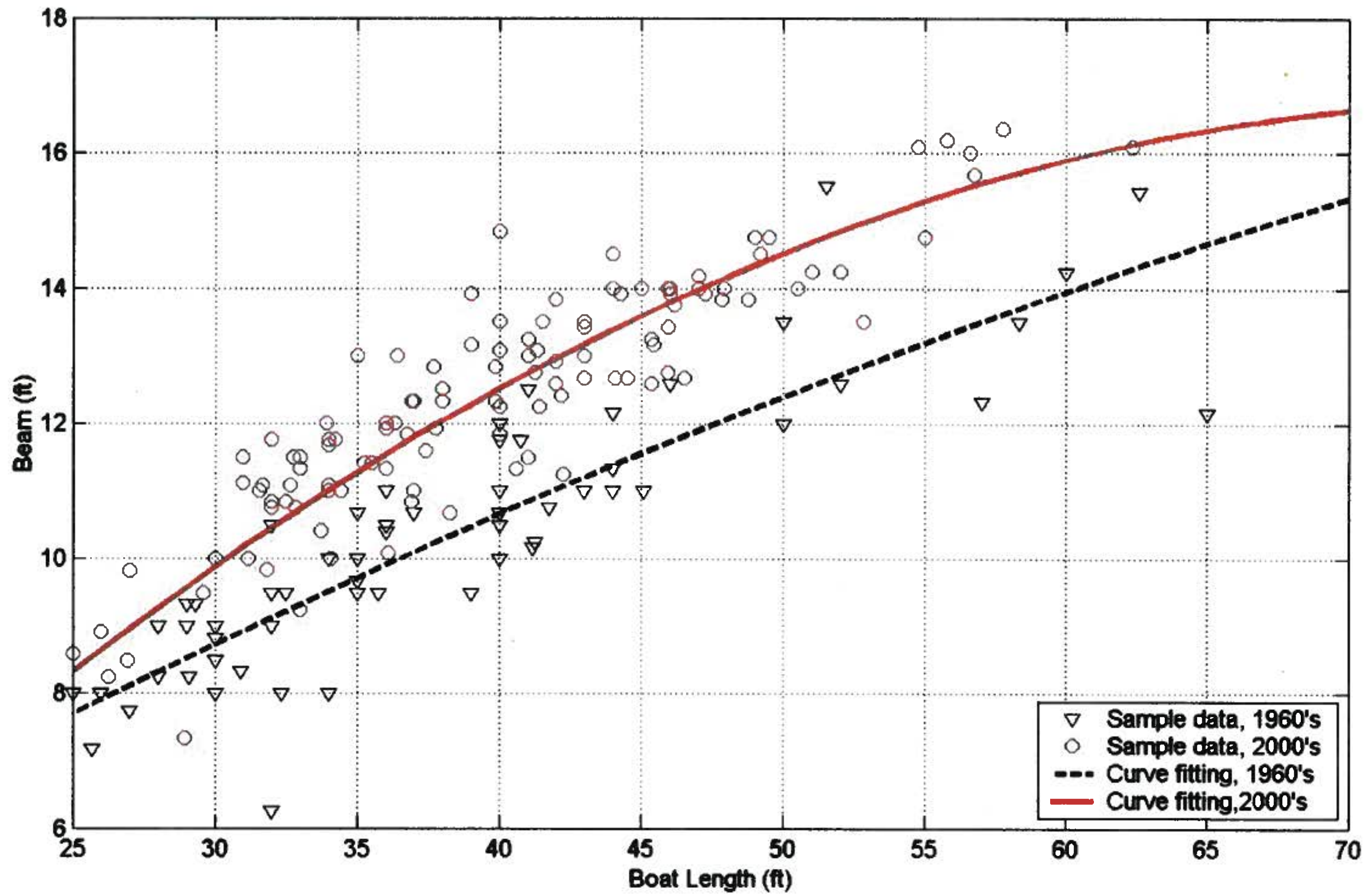


Figure 9. Boat Beam vs. Boat Length Variation for Sail Boats 1960-2008

X RECOMMENDED BOAT BERTH DISTRIBUTION FOR MARINA DEL REY MARINA RECONFIGURATIONS

In order to have consistent guidelines for the marinas within Marina del Rey that are being replaced and reconfigured, due to their age and in order to better accommodate the current market demand for berth sizes and support boating activities for the next 40 years, recommendations are presented to support the Department of Beaches and Harbors in the review and approval process. These recommendations pertain to slip size distribution, minimum size of slip, total slip count, floating dock layout dimensions, distribution of slip clear widths to accommodate sail boats versus power boats, accessible boating criteria, and dry boat storage.

Boat Berth Slip Length Distribution

Two recommended boat berth slip length distributions are shown in Table 12. The first distribution is recommended for all marinas combined in Marina del Rey that are listed in Table 1. Therefore, as individual marinas are reconfigured the individual reconfigured marina boat slip size distribution when added to all other marina boat slip size distributions should not exceed the recommended slip size distribution shown in Table 12 for all Marina del Rey marinas combined. In addition, the average marina slip length for all marinas combined should not exceed 40 feet unless there is justification.

The second distribution shown in Table 12 is recommended as the maximum case boat slip size distribution for an individual reconfigured marina. This distribution is recommended in order to accommodate those reconfigured marinas where additional boat berth slips of 30 feet or less in length are not justified, therefore resulting in a higher percentage of slips in the 31 feet to 50 feet length. The average slip length for this distribution should not exceed 44 feet unless there is justification.

The above slip length distributions and average slip lengths should not be considered absolute since there may be some marinas that have sufficient reason to exceed these recommendations while others are below these recommendations. The individual marinas being reconfigured need to consider their physical and financial conditions relevant to their parcel location and shape, along with market demand, in addition to conforming with the overall Marina del Rey guidelines. When the current proposed eight marina reconfigurations are added to the other existing Marina del Rey marinas (Proposed condition shown in Table 7), the combined slip length distribution and average slip length are both below the above recommendations. This is also true when combining only the 15 reconfigured and proposed reconfigured marinas shown in Table 8.

Table 12. Recommended MDR Boat Slip Size Distributions

Berth Length (feet)	Combined Percentage for all MDR Marinas	Maximum Case Percentage for Individual Marina
≤ 30'	30%	0%
31' – 35'	20%	30%
36' – 40'	19%	25%
41' – 45'	10%	20%
46' – 50'	10%	14%
> 50'	11%	11%
Total	100%	100%

Minimum Slip Size

It is recommended that the minimum slip length be 30 feet. In addition, it is recommended that only single boat berths be utilized since double boat berths are normally only used for slip lengths of 30 feet and less, and are not considered preferable in today's market. There is not sufficient justification to include slips below this length due to reduced market demand, the availability of additional dry boat storage, and the economic cost to construct floating docks. In addition, review of Table 3 show there are currently 2,414 slips in Marina del Rey that are 30 feet or less in length which is 51.0 percent of all slips as shown in Table 7. There are actually additional slips of 30 feet or less in length within Marina del Rey such as in Parcels EE and 48 that are not included within the marinas considered (see Table 1) in this report. Even when using the "proposed condition" shown in Table 3 there are still 1,642 slips of 30 feet in length or less which is still 38.6 percent of all slips (see Table 7).

Total Slip Count

For the marinas considered in this report (see Table 1) the total wet berth slip count is 4,731, with 817 dry boat storage for a total of 5,548 boats as shown in Table 3. Even with the reduction of wet berth slips from 4,731 to 4,255 slips for the "proposed condition" the total wet berth and dry boat storage only reduces from 5,548 to 5,343 boats, a 3.7% reduction, as shown in Table 3. The reduction of the smaller size wet berths, are significantly counted for in the increase of dry boat storage space. For the future it is recommended that this total wet berth plus dry boat storage remain above the 5,000 boat level by as much as possible by either adding additional dry boat storage and/or providing additional wet berth slips by utilizing currently under utilized waterfront space, such as consideration of the "funnel concept" within the main channel and better utilization of Parcels 55 and 56. It would seem feasible to maintain a total of 5,500 boats (wet berths plus dry boat storage); say 4,400 wet berths plus 1,100 dry boat storage.

Wet boat slips not included within these numbers include 47 existing slips for Parcels EE, 48 and 77, the existing slips in Parcel 1 (Fuel Dock), plus the commercial slips in Parcels 55 and 56. There may also be others not within Marina del Rey not mentioned in this report. In addition, if end tie and inside tie slips are included within the total number of slips this could increase the total slips by up to 10 percent. The proposed reconfiguration of Parcel 45/47 and its reduction in total slips will partially be offset by the proposed reconfiguration of Parcels EE, 48 and 77 as part of this project. This will provide for improved slip utilization in these parcels and will also include a marine boat center and large floating dock facility for small sail and row boats well under 30 feet in length for the proposed reconfiguration of Parcel 77. This has not been accounted for in this report. In addition, the approved reconfiguration and replacement of Parcel 1, the fuel dock, will include an additional approximate 13 boat berths.

Floating Dock Layout Dimensions

It is recommended that the July 2005 DBAW, "Layout and Design Guidelines for Marina Berthing Facilities" be followed for marina dock layout and dimensioning. In addition, the current County guidelines for Marina del Rey should be met. Therefore, reconfigured marinas that currently don't meet the minimum DBAW criteria and County criteria where applicable, for slip clear widths, finger widths, main walkway widths, fairway widths and ADA criteria will result in fewer slips even when the slip size distribution is not increased.

Distribution of Slip Clear Widths

In order to access what the existing distribution of power boats versus sail boats is within Marina del Rey, Google Earth was utilized to view the berthed boats at the time of the aerial photograph for Parcels 7, 18, 42, 45 and 47. It was assumed that these five parcels would provide a reasonable assessment of the distribution between power and sail boats within Marina del Rey. Table 13 tabulates the results of this assessment.

Based on the above results it is recommended that the marina slip clear width requirements be based on 50 percent power boats and 50 percent sail boats unless there is sufficient justification to do otherwise.

Accessible Boating Facilities Criteria

The July 2005 DBAW, "Layout and Design Guidelines for Marina Berthing Facilities" includes Appendix B which is title, "ADAAG 15.2/ADA-ABA 1003 Accessible Boating Facilities". It is recommended that the proposed reconfigured marinas within Marina del Rey abide by these criteria or by County ADA requirements where more stringent, for accessible route (gangways), accessible boat slips, minimum number of boat slips, distribution of boat slips, minimum finger dock and main dock widths, and other criteria as appropriate.

Table 13. Distribution of Power Boats vs. Sail Boats For Marina del Rey Marinas

Parcel No.	Power Boats (%)	Sail Boats (%)
7	115 (55%)	94 (45%)
18	165 (45%)	119 (55%)
42	92 (45%)	113 (55%)
45	37 (32%)	77 (68%)
47	57 (33%)	114 (67%)
Totals	466 (47.4%)	517 (52.6%)

Currently, we are aware of the following ADA gangways in Marina del Rey:

- Parcel 12 : One ADA Gangway
- Parcel 18 : One ADA Gangway
- Parcel 20: One ADA Gangway
- Parcel EE: One ADA Gangway
- Parcel 48: Two ADA Gangways
- Parcel 111: Three ADA Gangways
- Parcel 112 : Three ADA Gangways

The only current existing ADA designated slips that we are aware of within Marina del Rey marinas, is for the reconfigured marinas at Parcels 111 and 112, in which the approved plans show 14 ADA slips for 319 total slips, which would exceed the referenced DBAW requirement. The specified DBAW requirement is shown in Table 14, however the County criteria may be more stringent.

Where the number of boat slips is not identified, each 40 feet of boat slip edge provided along the perimeter of the pier shall be counted as one boat slip. Boat slips shall be dispersed throughout the various types of boat slips provided.

Currently we believe that the proposed reconfiguration of the Cabrillo Way Marina in San Pedro by the Port of Los Angeles will meet all DBAW ADA requirements for accessibility of its boating facility. As other marinas are reconfigured and replaced they will undoubtedly need to meet the latest ADA accessibility requirements.

Dry Boat Storage

The existing and proposed dry boat storage is shown in Table 3. Parcel 52/GG will include a very modern, state of the art, dry stack storage facility for approximately 349 boats, with approximately 32 mast-up spaces, plus 4 boat launch elevators and one boat launch crane, and new floating docks with ADA access for use by the facility operator and its clientele. This dry stack boat facility will replace the mast-up and power boat dry storage at Parcel 77 that will be eliminated. However, the proposed marine center and large floating dock for small sail boats, row boats and boating lessons will be a benefit to the recreational public for the use of small size boats. Additionally, the redevelopment of Parcel 44 will include a dry stack boat facility for 234 boats. Also, not included within this table is dry boat storage at the Del Rey Yacht Club and the California Yacht Club. It is recommended that the County continue to encourage and support the improvement of dry boat storages where suitable. This will accommodate the loss of smaller wet berth slips during the reconfiguration and replacement of marinas.

Table 14. ADA Boat Slips

Total Number of Boat Slips Provided in Facility	Minimum Number of Required Accessible Boat Slips
1 to 25	1
26 to 50	2
51 to 100	3
101 to 150	4
151 to 300	5
301 to 400	6
401 to 500	7
501 to 600	8
601 to 700	9
701 to 800	10
801 to 900	11
901 to 1000	12
1001 and over	12, plus 1 for each 100 or fraction thereof over 1000

XI REFERENCES

1939 and Supplement thereto, 1947, "Marinas, Recommendations for Design, Construction and Maintenance," by C.A. Chaney, the National Association of Engine and Boat Manufacturers, Inc.

1953, Revised 1958 and 1960, "The Modern Marina – a Sound Business Opportunity for Community Investor and Operator," by National Association of Engine and Boat Manufacturers, Inc.

1954, September, "Waterfront and Harbor Facilities," by Bureau of Yard and Docks, U.S. Navy Tech. Publication Navy Docks TP-PW-8.

1957, December, "Problems with Small Craft Harbors," by H.M. Noble, Proceedings of Sixth Conference on Coastal Engineering, Council on Wave Research and the Engineering Foundation, Chapter 38.

1959, September, "Planning and Development of California's Marinas," by J.W. Dunham, Civil Engineering, ASCE, Vol. 29, No. 9.

1960, April, First issue of "Marina," the News and Merchandising Magazine for the Marina Pleasure Boating Trade, by Marina Publications Inc., Baltimore, Maryland.

1960, November, "Design Considerations for California Marinas," by J.W. Dunham, Journal of the Waterways and Harbors Division, ASCE, Vol. 86, No. WW4.

1964. March, "California's Small Craft Harbors and Facilities Plan," by Leeds, Hill and Jewett, Inc., for Division of Small Craft Harbors, Department of Parks and Recreation, State of California.

1967, August, "Marina – Operations and Service," by National Association of Engine Boat Manufacturers, Inc.

1969, "Report on Small Craft Harbors," by Task Committee on Small Craft Harbors, Waterways and Harbors Division, ASCE, Manual and Report on Engineering Practice No. 50.

1972, April, "Marinas and Small Craft Harbours", Proceedings of a Symposium held at the University of Southampton, Great Britain.

1974, "Small-Craft Harbors: Design, Construction and Operation," by J.W. Dunham and A.A. Finn, Special Report No. 2, U.S. Army Corps of Engineers, Coastal Engineering Research Center, Waterways Experiment Station.

1975, March, "Uniform Guidelines for Assessing the Equity of Anchorage Rates at Marina del Rey", by Williams-Kuebelbeck and Associations, Inc., for County of Los Angeles, Department of Small Craft Harbors.

1977, February, "Marina Management Study, Volume 1: Management and Operating Guidelines for Public Marinas," by Williams, Kuebelbeck & Associates, Inc., for Department of Navigation and Ocean Development, State of California.

1977, February 14-16, "Proceedings of First National Boating Facilities Conference and Workshop", Newport, Rhode Island, Co-sponsored by the: Boating Industry Associations, Sea Grant/NOAA, University of Rhode Island Marine Advisory Service, and New England Marine Advisory Service.

1977, November, Partially updated December 1982 "Inventory of California Boating Facilities," by Management Consulting Corporation, for Department of Navigation and Ocean Development, State of California.

1979, January, "Engineering Study of Concrete Berthing Systems," By Winzler & Kelly, for Department of Boating and Waterways, State of California.

1979, October 22-24, "Proceedings of Second National Boating Facilities Conference", Berkeley, California, Sponsored by: National Marine Manufacturers Association and the University of California Sea Grant College Marine Advisory Program.

1980, January, "Layout and Design Guidelines for Small Craft Berthing Facilities," by Department of Boating and Waterways, State of California.

2001, April 20, "Marina Del Rey – Boat Slip Sizing and Pricing Study," by Williams-Kuebelbeck & Associates, Inc. for Los Angeles County Department of Beaches and Harbors.

2004, May 18, "Marina del Rey – Boat Slip Sizing and Pricing Study Update," by Williams-Kuebelbeck & Associates, Inc., for Legacy Partners Residential, Inc.

2005, July, "Layout and Design Guidelines for Marina Berthing Facilities," by California Department of Boating and Waterways, State of California.

2006, March, "Berthing Study", excerpt on San Francisco Marina facilities, by California Association of Harbor Masters and Post Captains.

2007, "2006 Recreational Boating Statistical Abstract", by National Marine Manufacturers Association.

2008, "2007 Recreational Boating Statistical Abstract", by National Marine Manufacturers Association.

XII APPENDIX A: MARINA DEL REY SLIP SIZE DISTRIBUTIONS

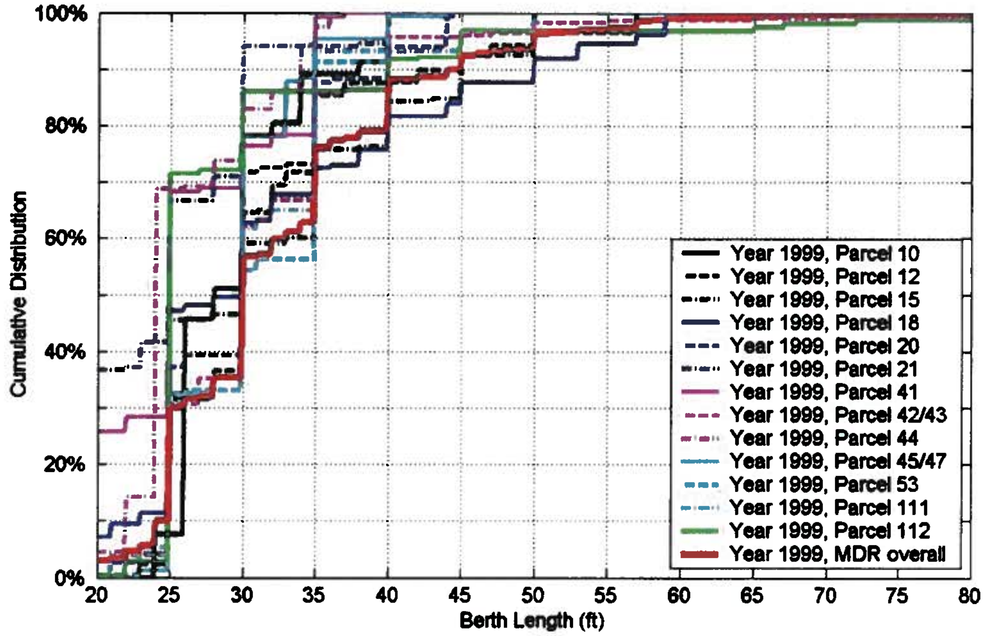


Figure A-1. Cumulative Distribution of Slip Length for MDR Marinas (with Smaller Slips, 1999)

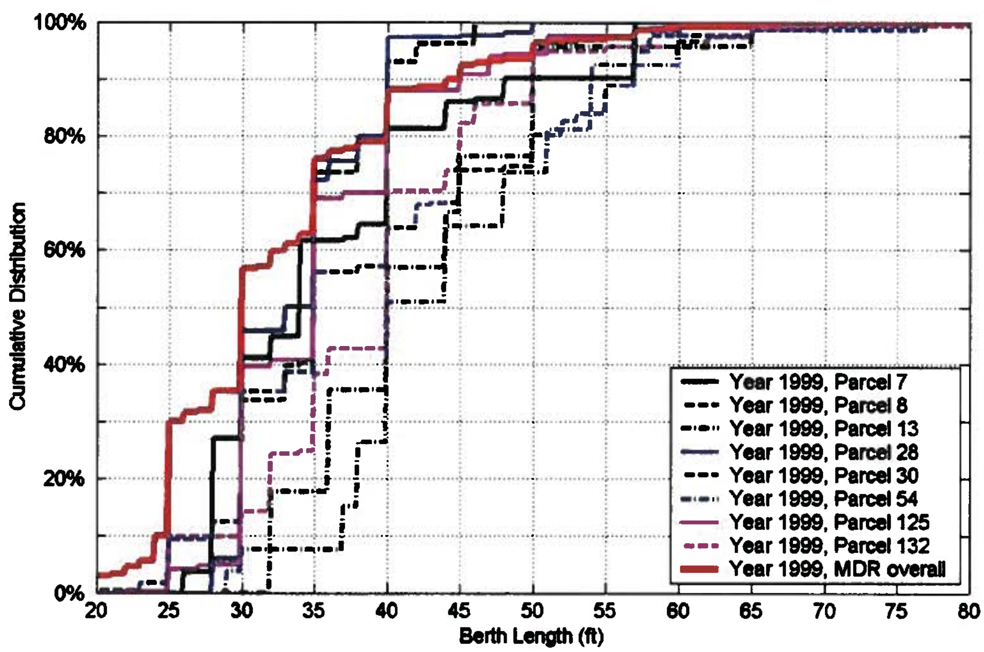


Figure A-2. Cumulative Distribution of Slip Length for MDR Marinas (with Larger Slips, 1999)

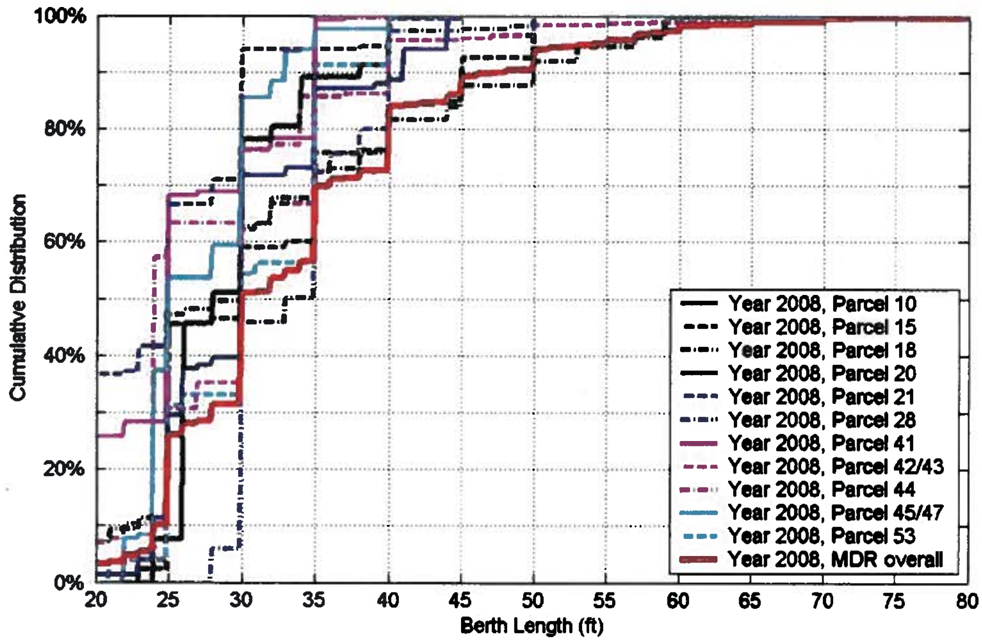


Figure A-3. Cumulative Distribution of Slip Length for MDR Marinas (with Smaller Slips, 2008)

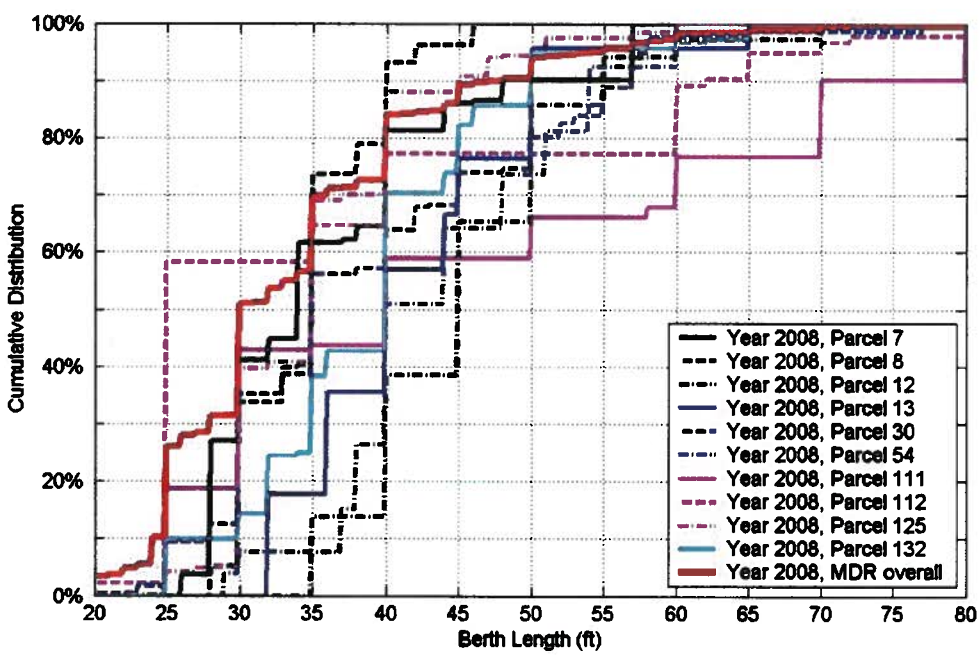


Figure A-4. Cumulative Distribution of Slip Length for MDR Marinas (with Larger Slips, 2008)

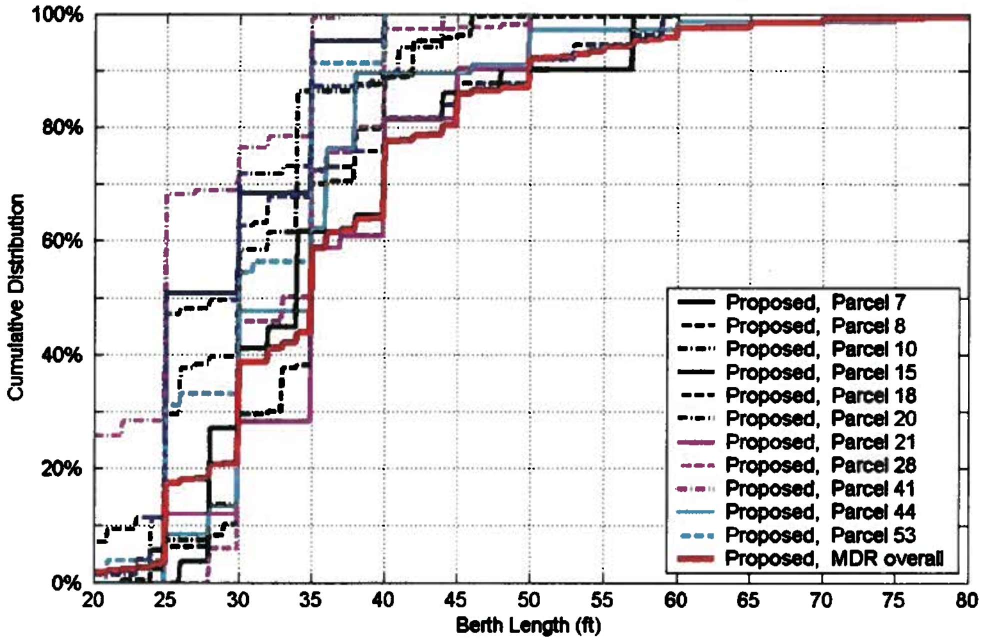


Figure A-5. Cumulative Distribution of Slip Length for MDR Marinas (with Smaller Slips, Proposed)

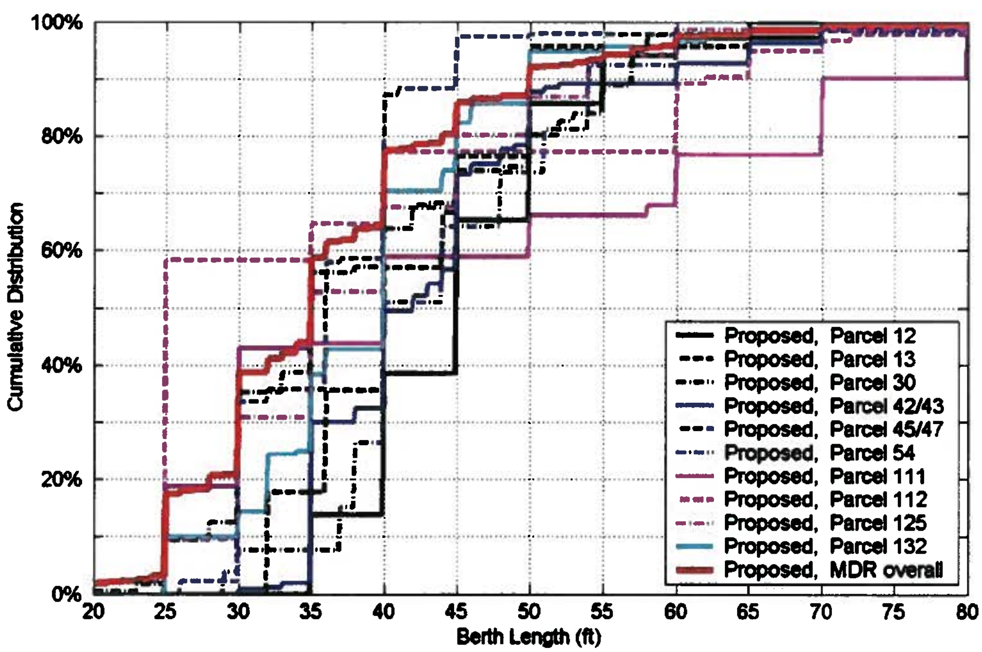


Figure A-6. Cumulative Distribution of Slip Length for MDR Marinas (with Larger Slips, Proposed)

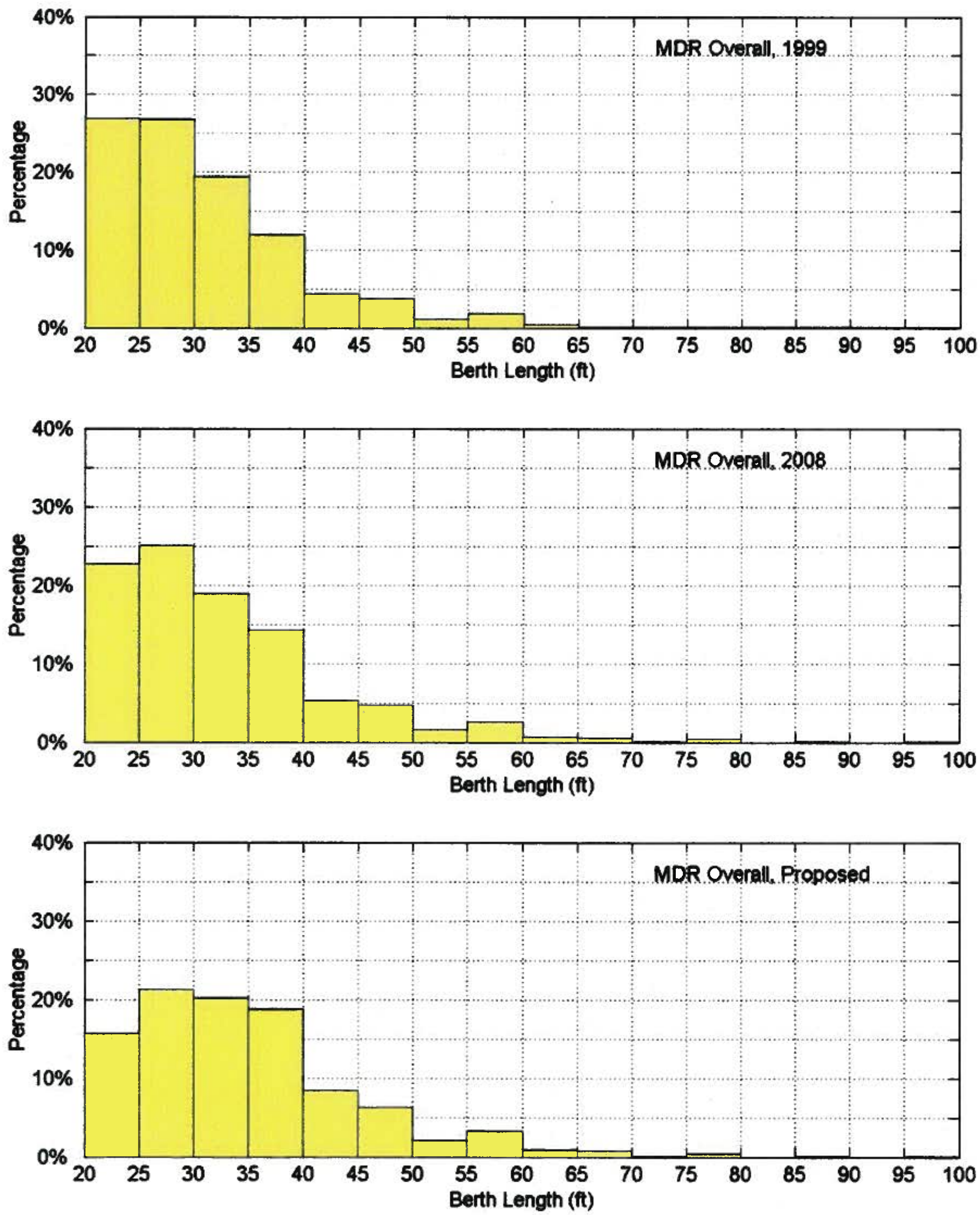


Figure A-7. Slip Size Distribution of MDR between 1999, 2008 and Proposed

XIII APPENDIX B: OTHER MARINA SLIP SIZE DISTRIBUTIONS

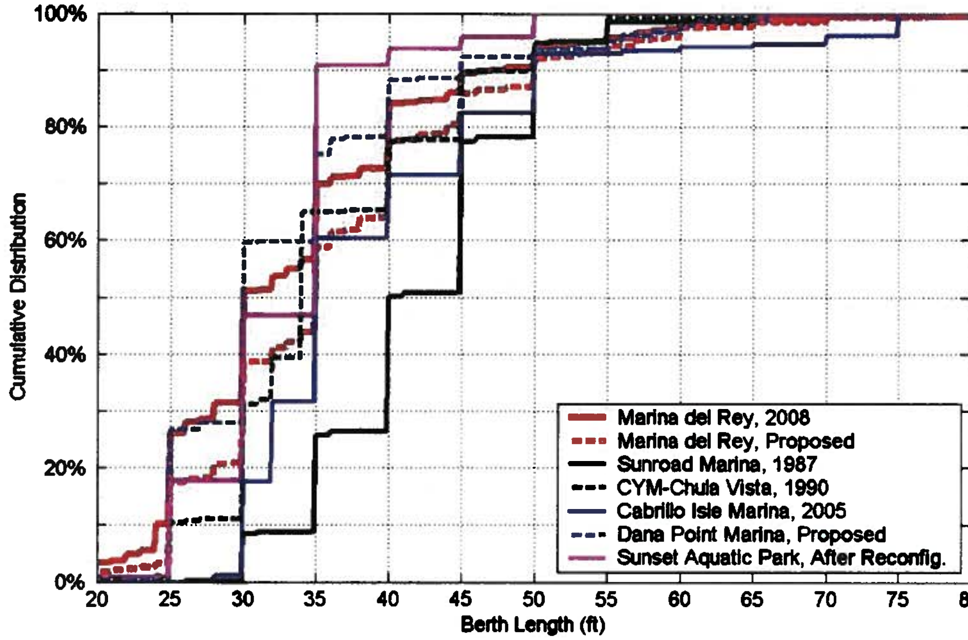


Figure B-1. Cumulative Distributions of Berth Lengths for MDR vs. Other Marinas – San Diego and Orange Counties

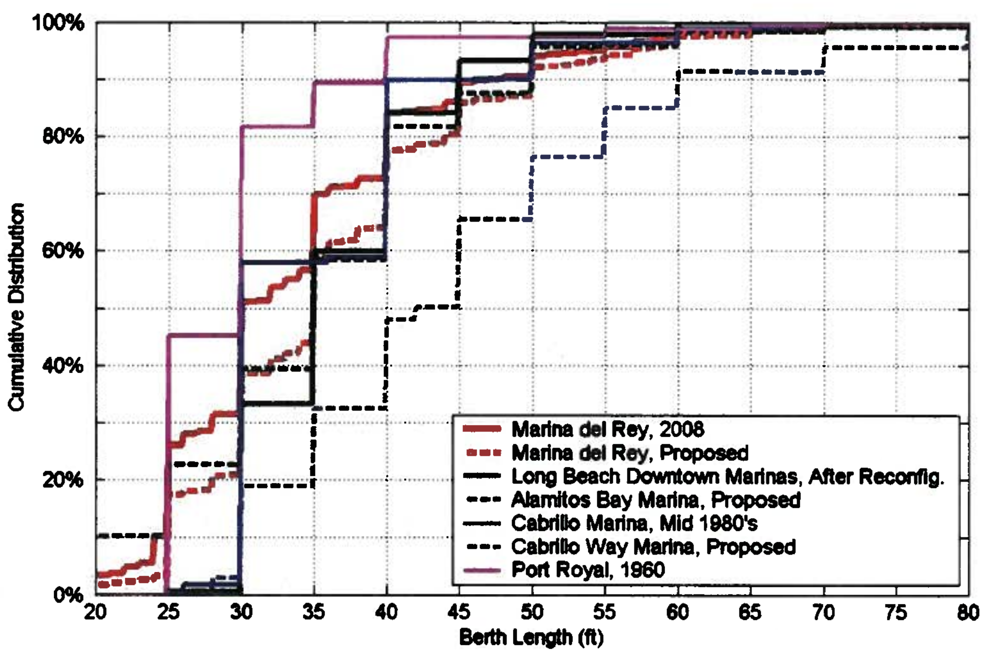


Figure B-2. Cumulative Distributions of Berth Lengths for MDR vs. Other Marinas – Los Angeles County

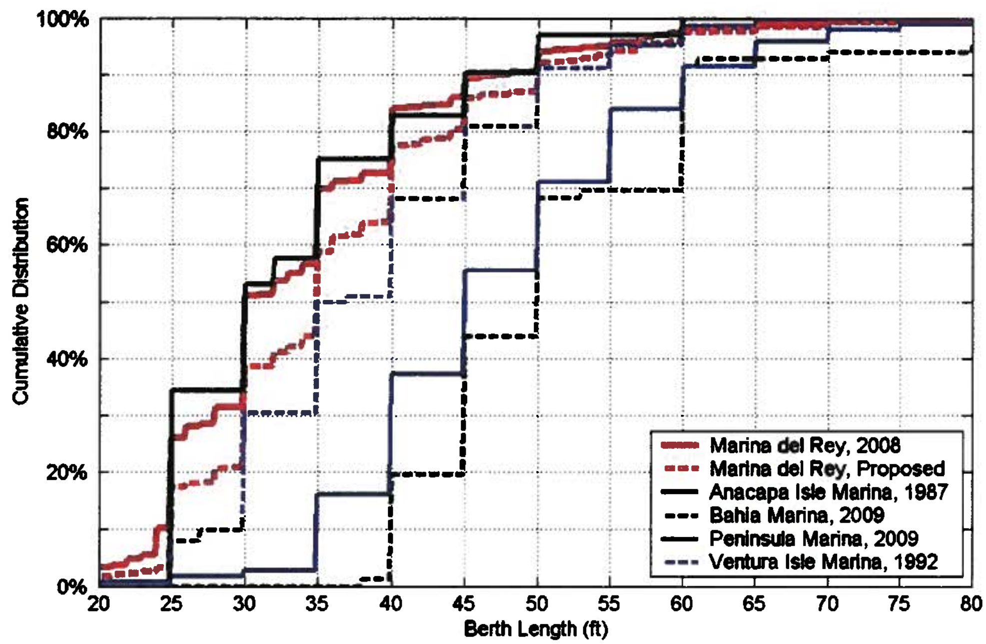


Figure B-3. Cumulative Distributions of Berth Lengths for MDR vs. Other Marinas – Ventura County

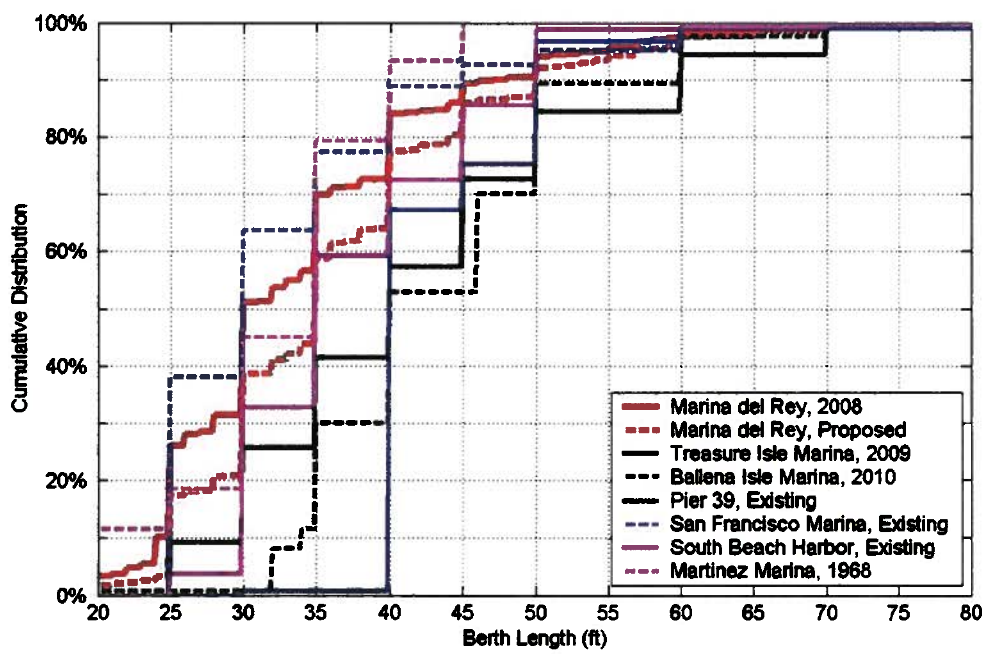


Figure B-4. Cumulative Distributions of Berth Lengths for MDR vs. Other Marinas – San Francisco Bay

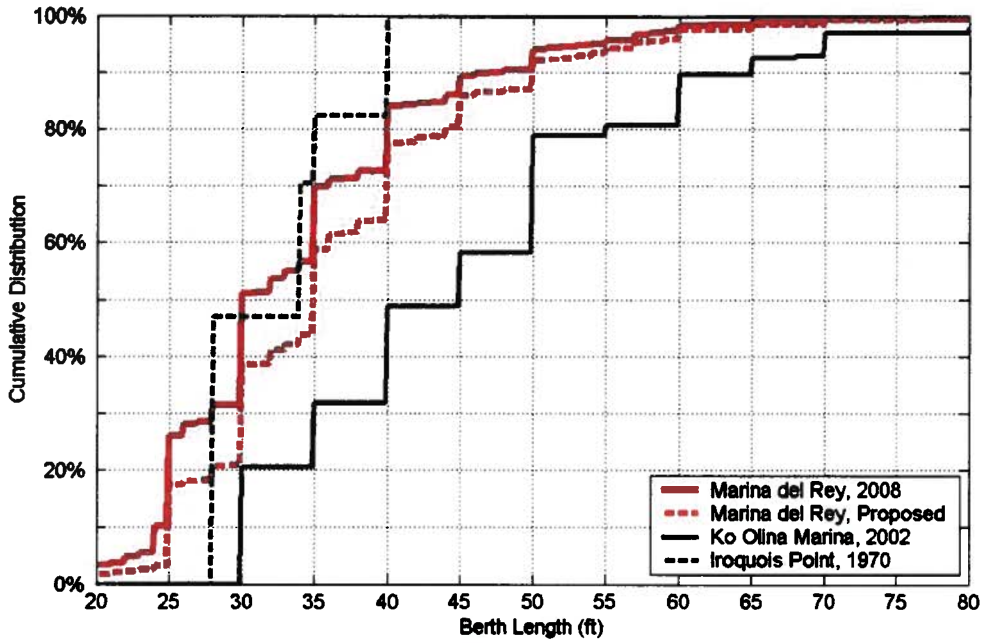
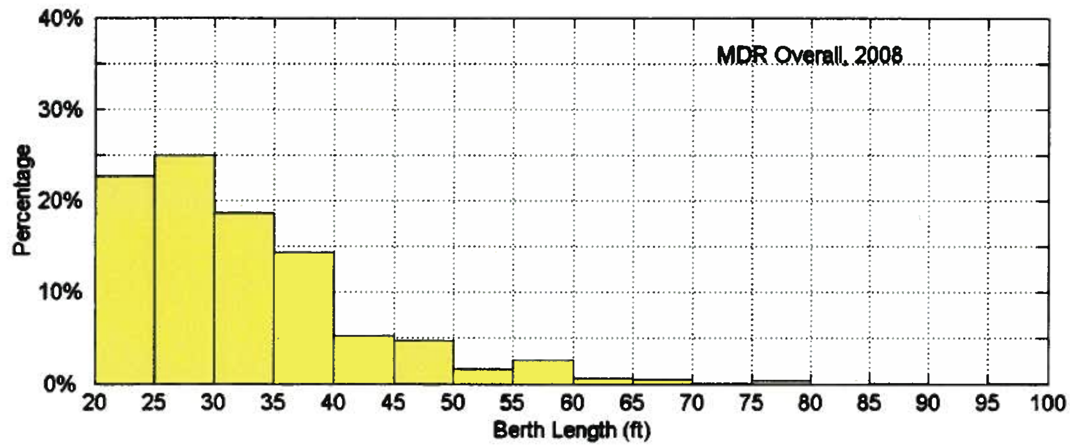


Figure B-5. Cumulative Distributions of Berth Lengths for MDR vs. Other Marinas – Honolulu



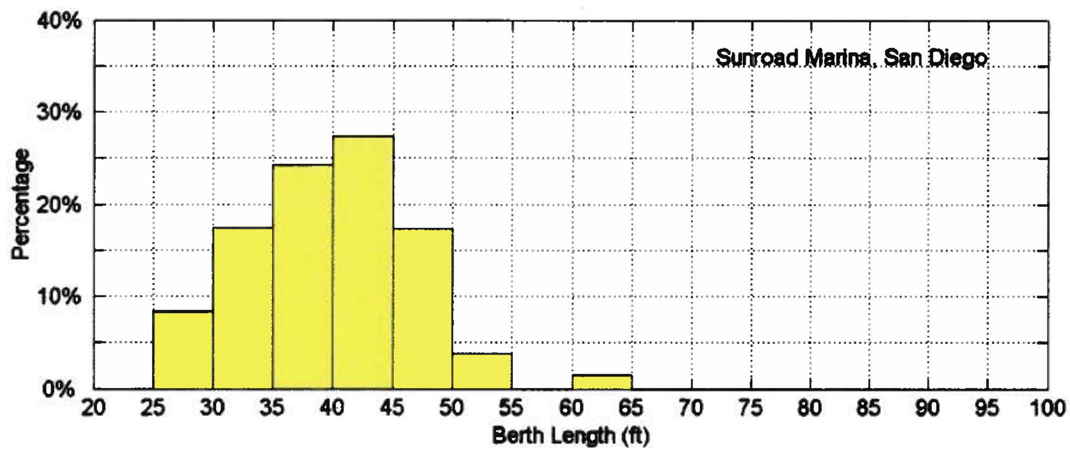


Figure B-6. Slip Length Distribution between MDR and Sunroad Marina

XIV APPENDIX C: MARINA DEL REY RECONFIGURED AND PROPOSED SLIP SIZE DISTRIBUTIONS

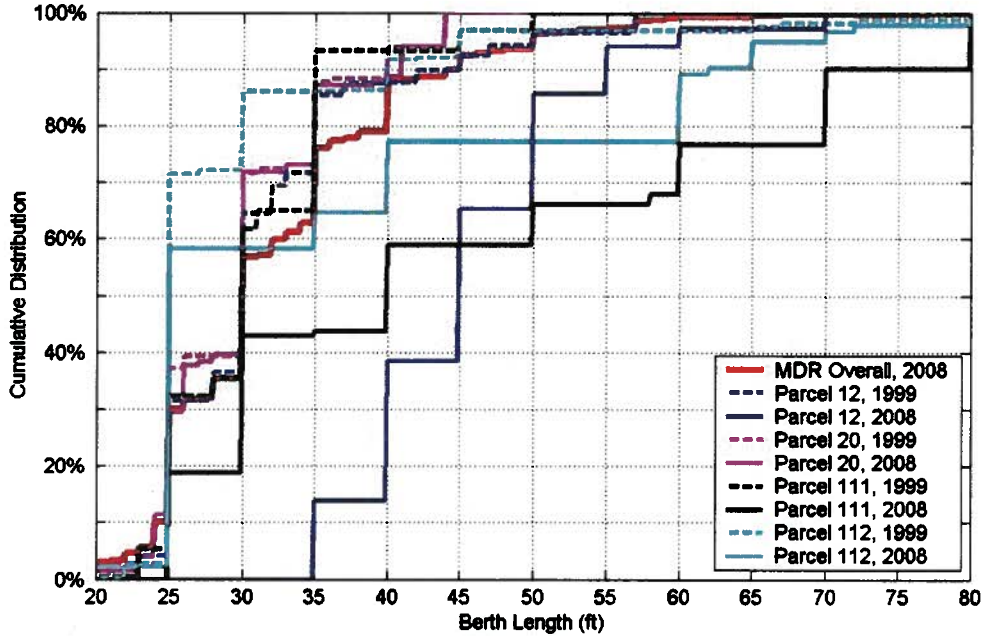


Figure C-1. Cumulative Distributions of Slip Lengths for MDR Marinas: Before and After Reconfiguration

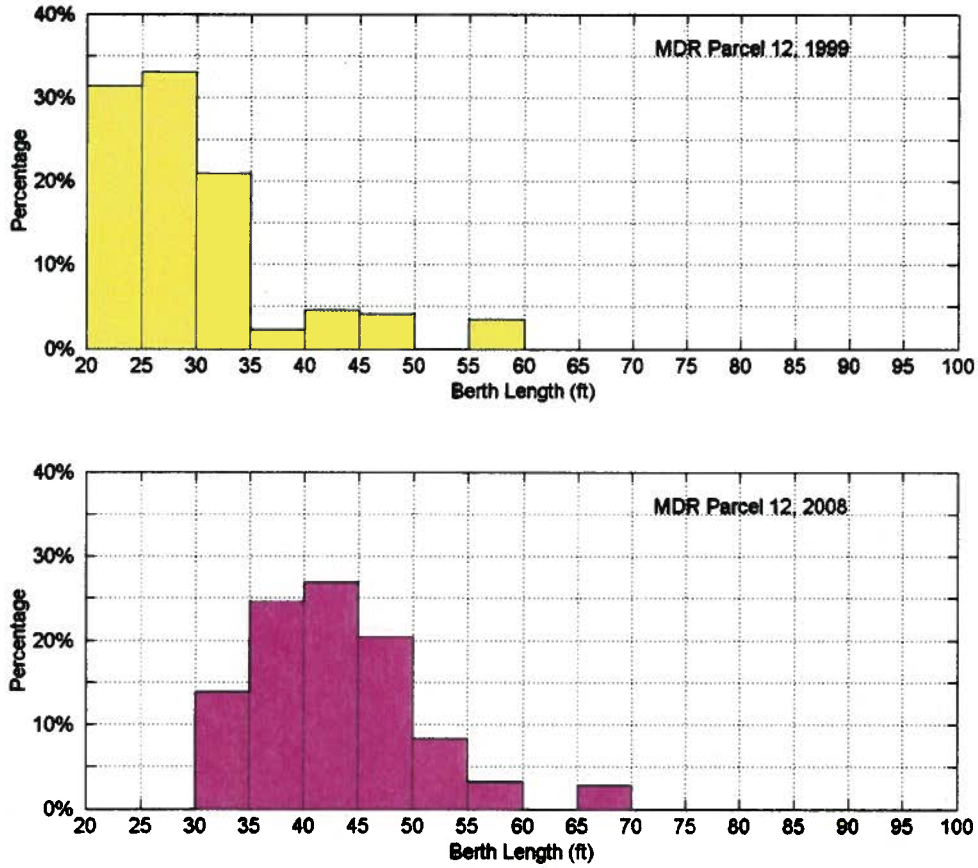


Figure C-2. Slip Length Distribution of MDR Parcel 12 for 1999 and 2008

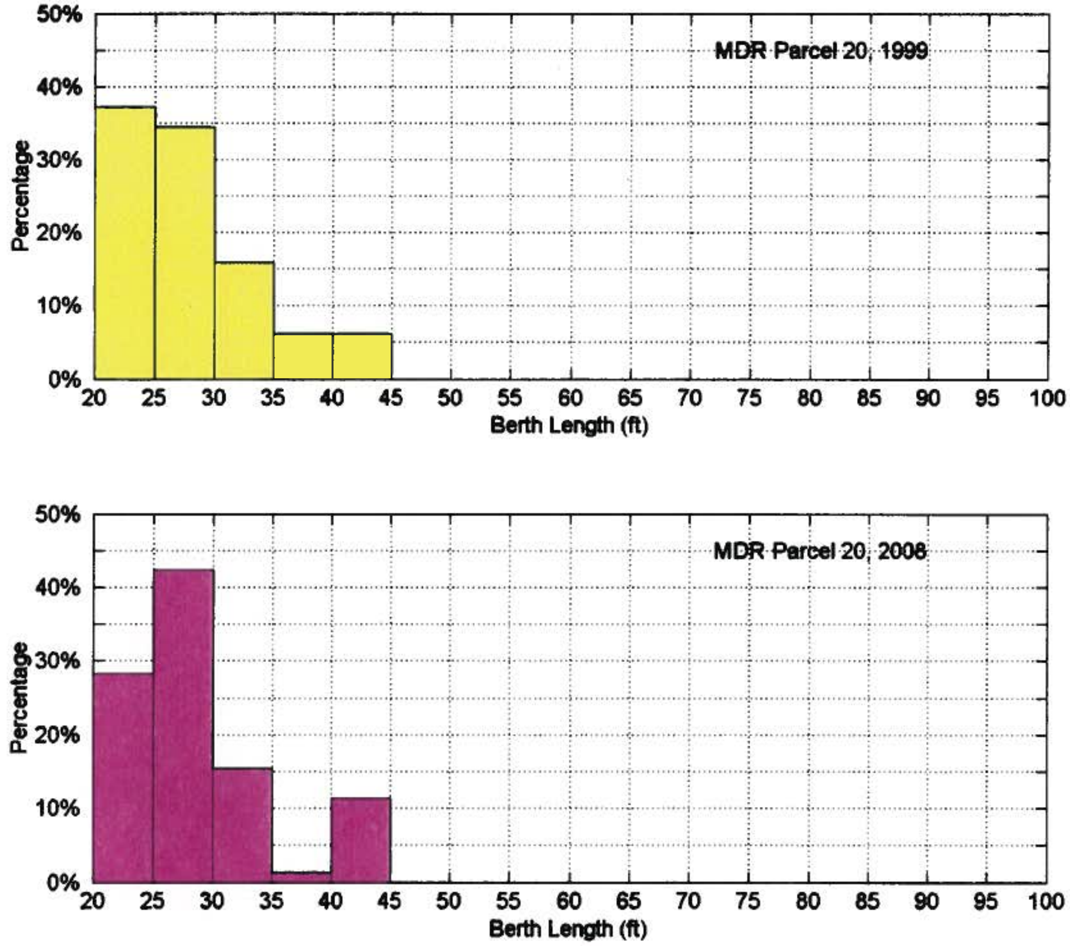


Figure C-3. Slip Length Distribution of MDR Parcel 20 for 1999 and 2008

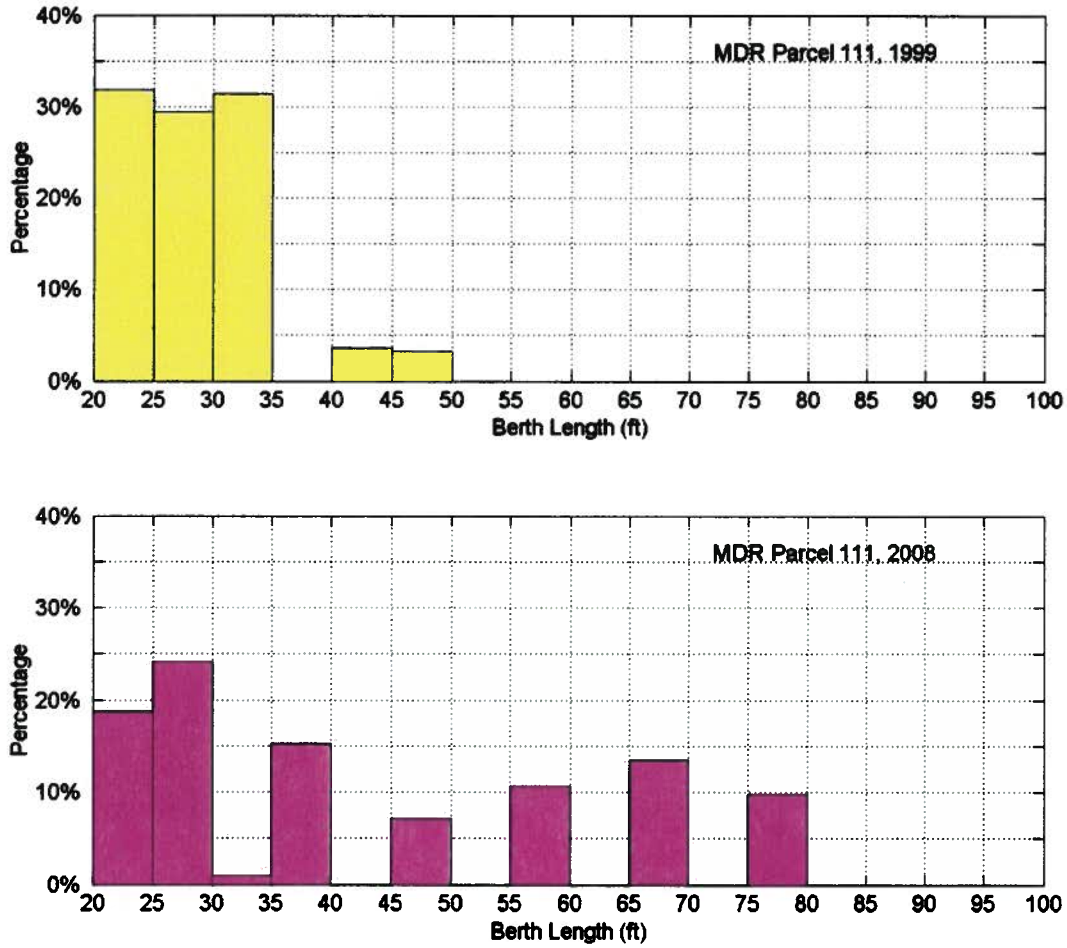


Figure C-4. Slip Length Distribution of MDR Parcel 111 for 1999 and 2008

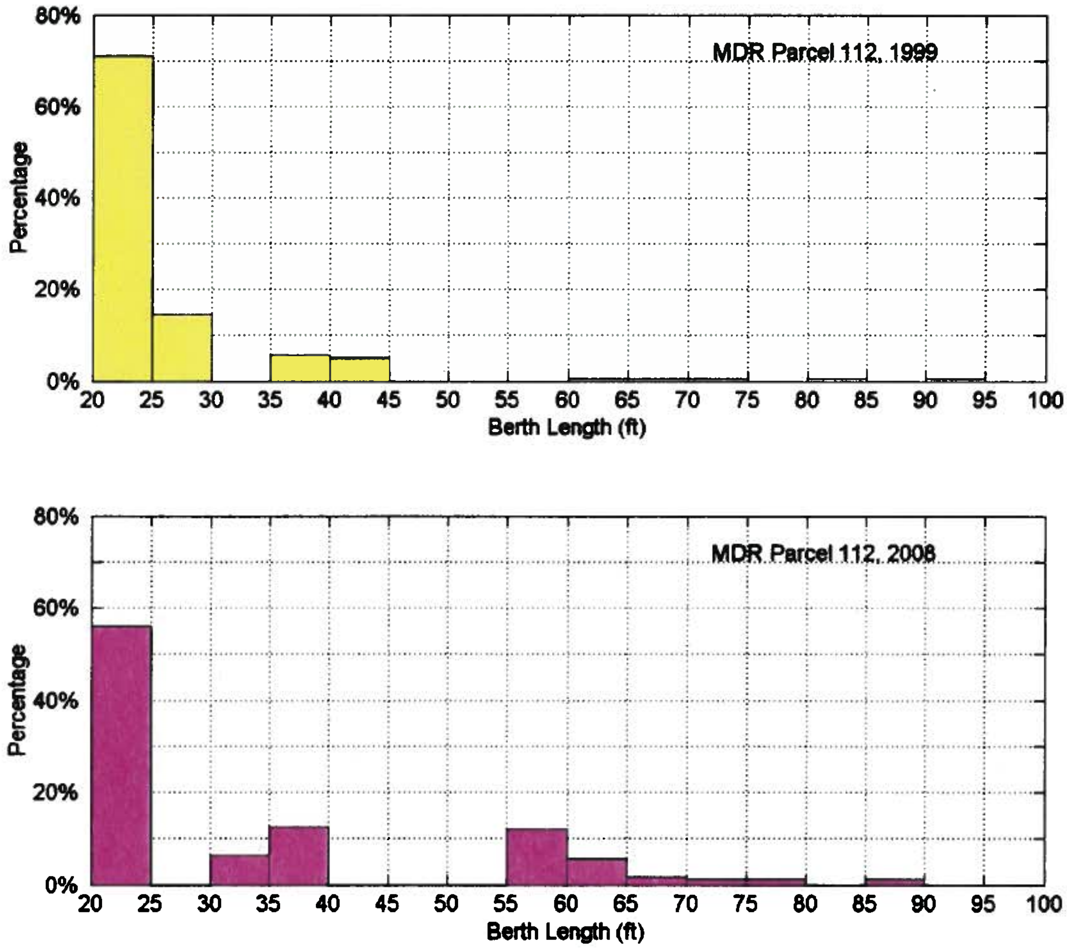


Figure C-5. Slip Length Distribution of MDR Parcel 112 for 1999 and 2008

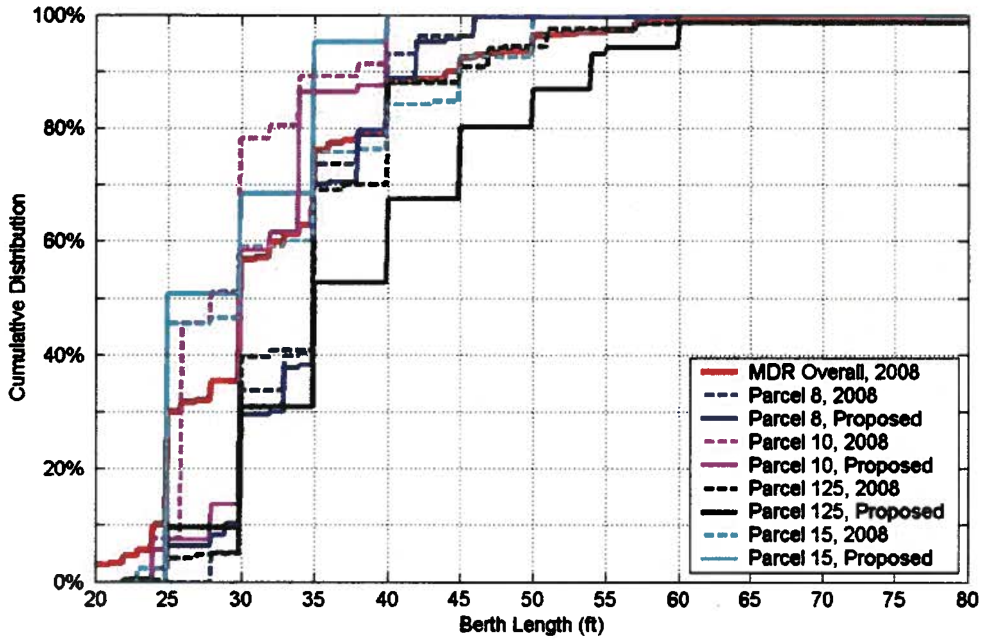


Figure C-6. Cumulative Distributions of Slip Lengths for MDR Marinas: Existing vs. Proposed

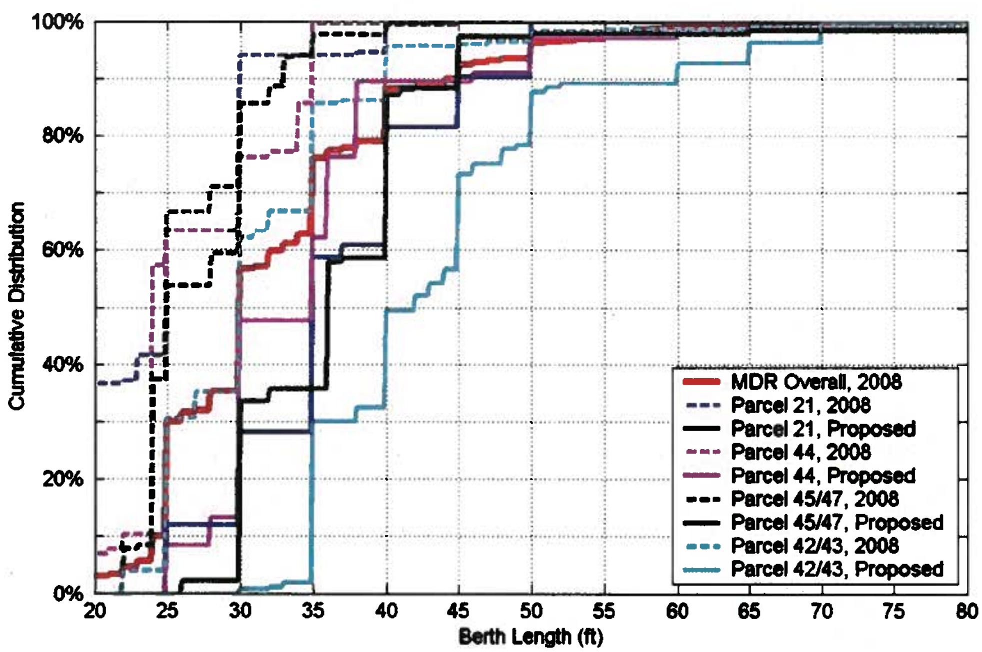


Figure C-7. Cumulative Distributions of Slip Lengths for MDR Marinas: Existing vs. Proposed

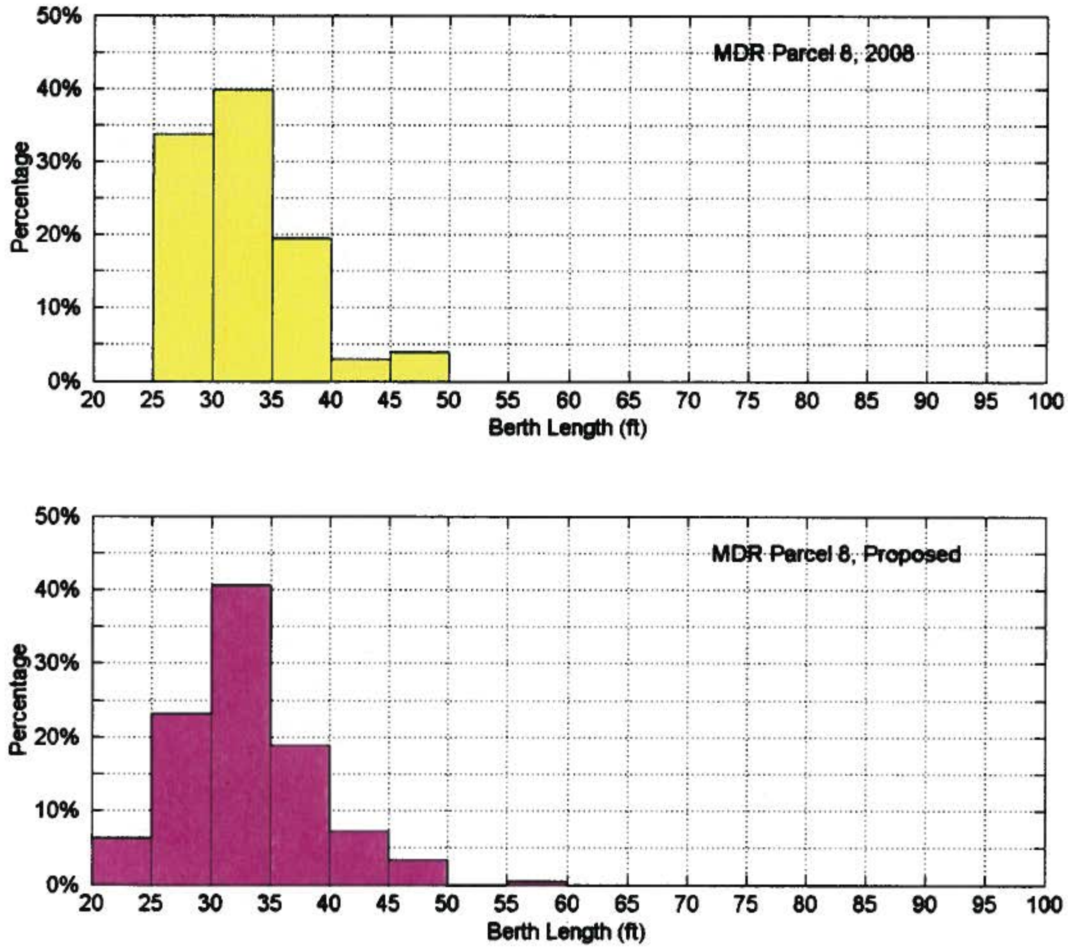


Figure C-8. Slip Length Distribution of MDR Parcel 8: Existing vs. Proposed

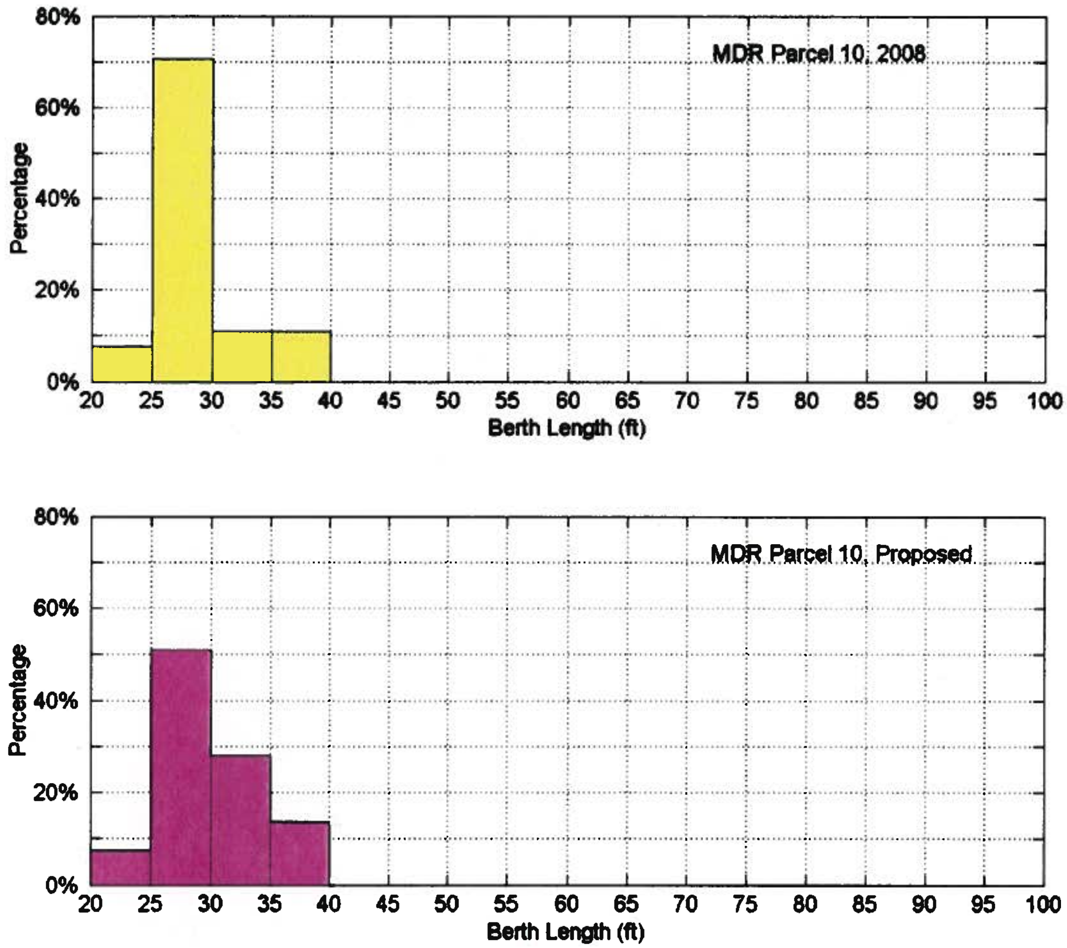
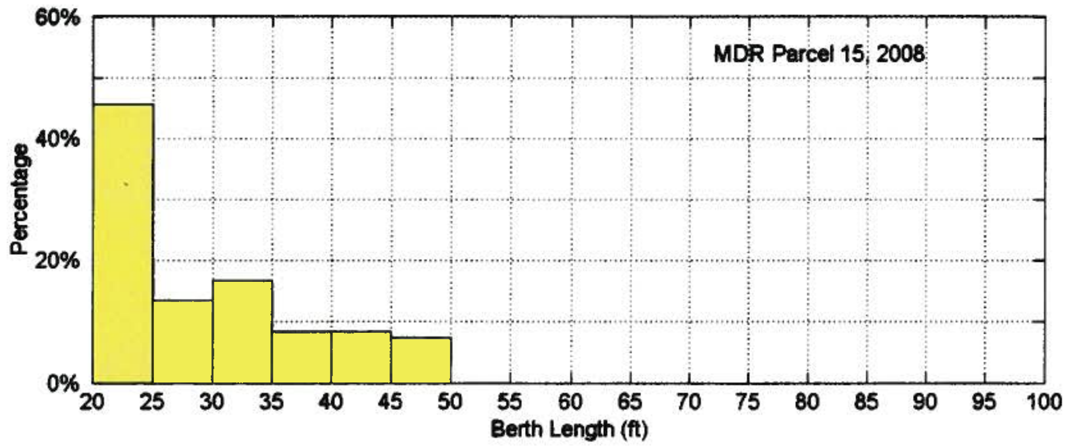


Figure C-9. Slip Length Distribution of MDR Parcel 10: Existing vs. Proposed



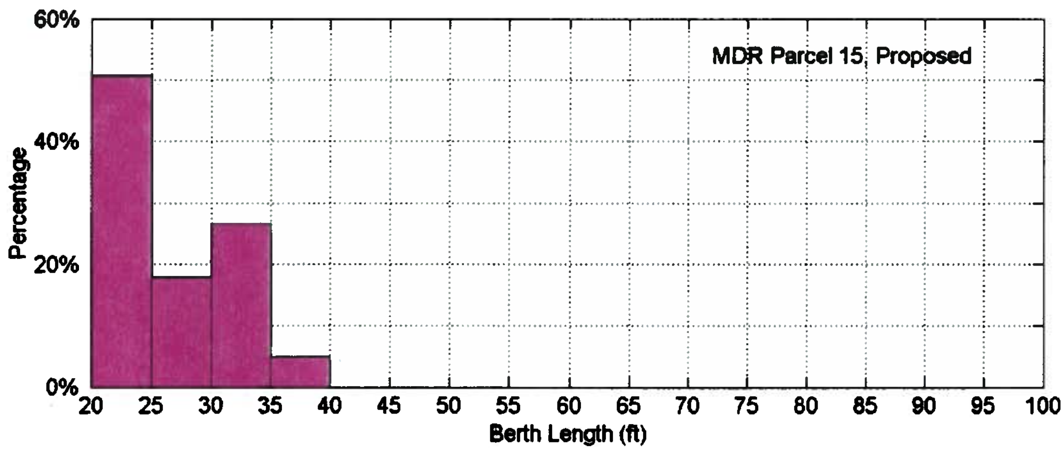


Figure C-10. Slip Length Distribution of MDR Parcel 15: Existing vs. Proposed

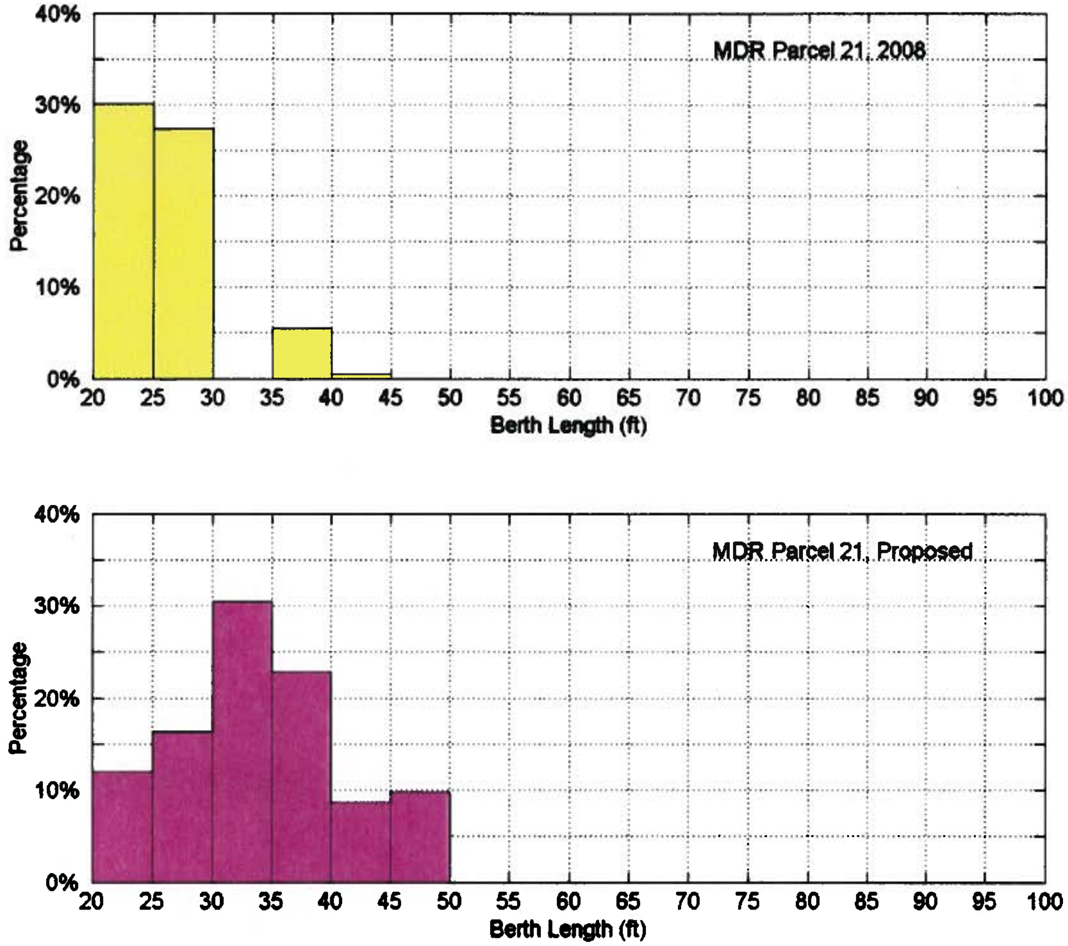


Figure C-11. Slip Length Distribution of MDR Parcel 21: Existing vs. Proposed

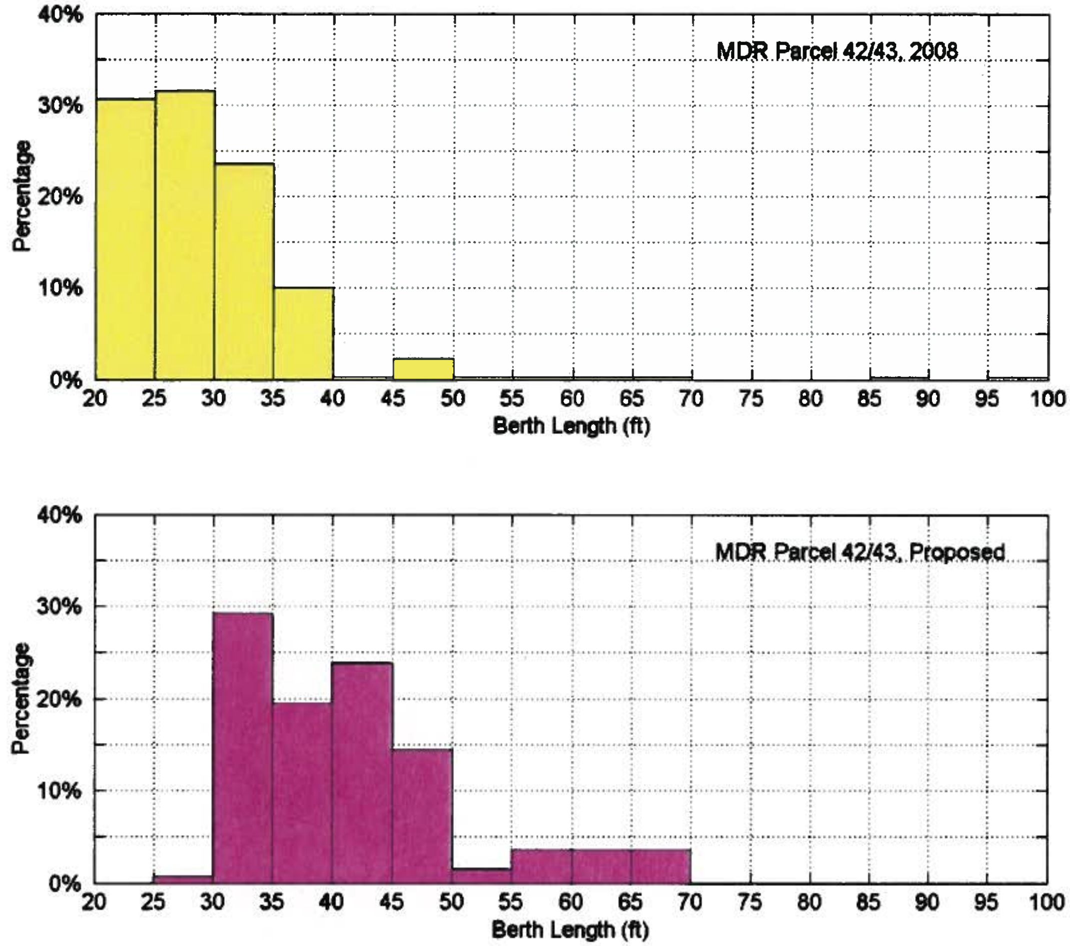
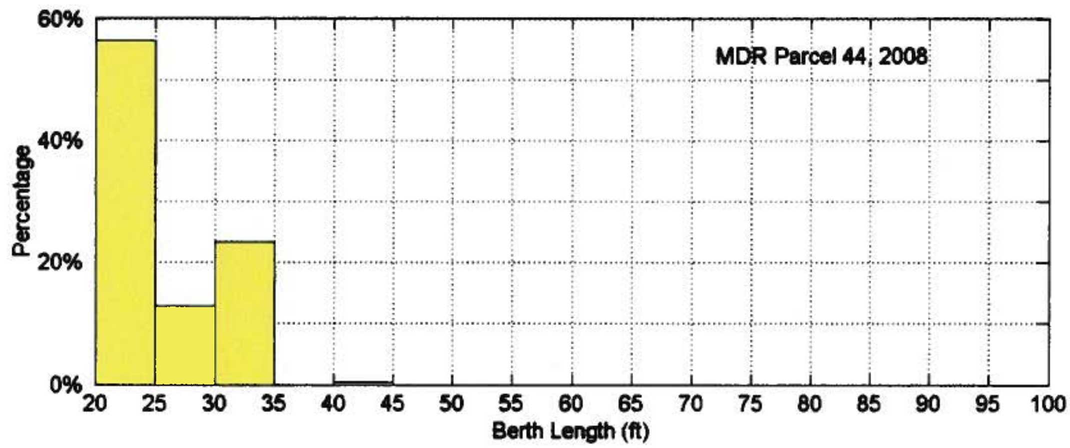


Figure C-12. Slip Length Distribution of MDR Parcel 42/43: Existing vs. Proposed



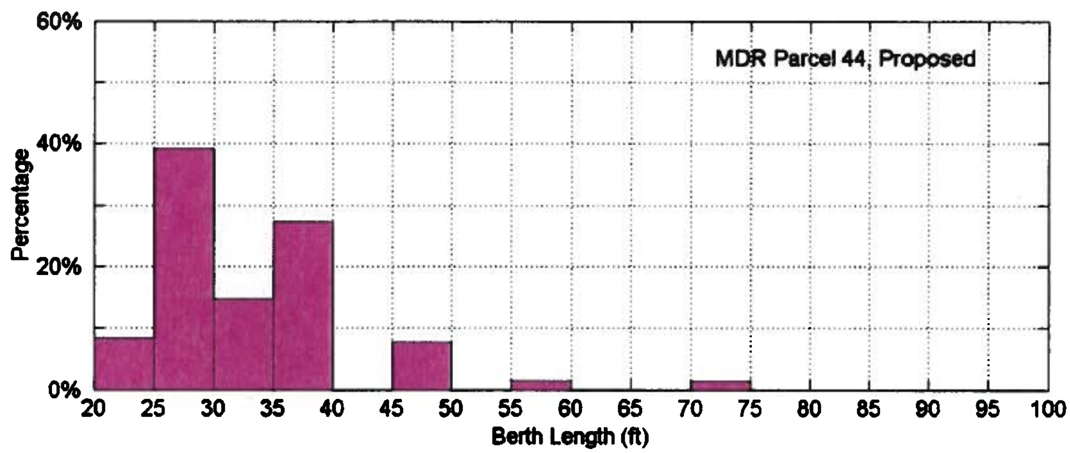
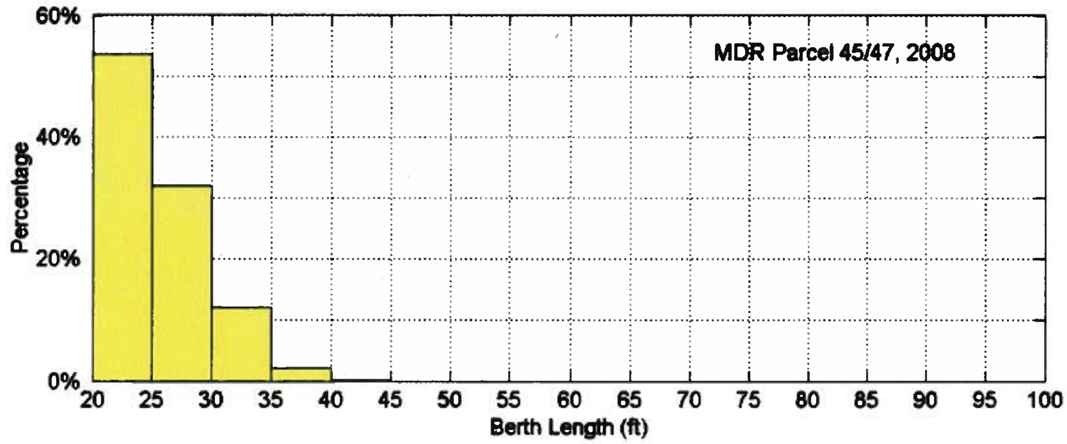


Figure C-13. Slip Length Distribution of MDR Parcel 44: Existing vs. Proposed



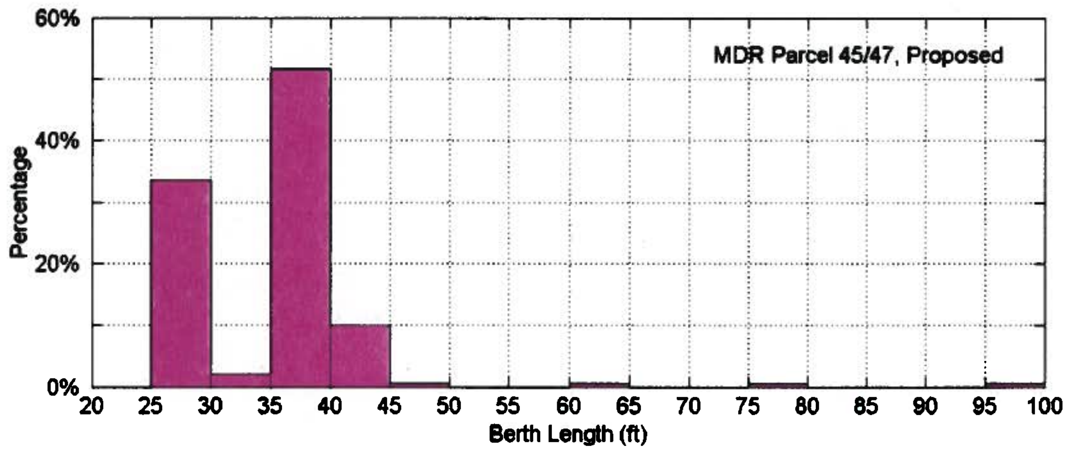


Figure C-14. Slip Length Distribution of MDR Parcel 45/47: Existing vs. Proposed

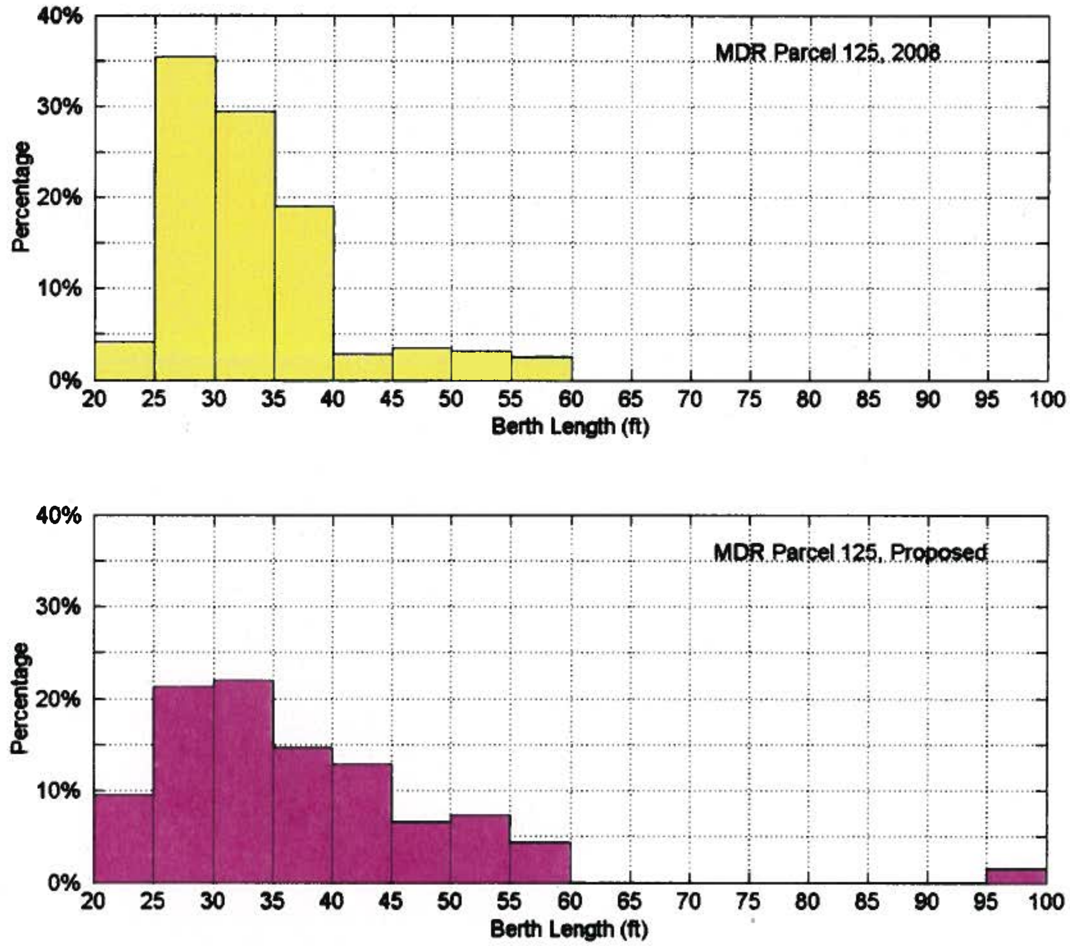


Figure C-15. Slip Length Distribution of MDR Parcel 125: Existing vs. Proposed

XV APPENDIX D: RESPONSE TO PUBLIC COMMENTS ON MARINA DEL REY SLIP SIZING STUDY

On March 24, 2009 Los Angeles County Department of Beaches and Harbors ("DBH") released a copy of Noble Consultants, Inc.'s (NCI) Final Draft Report, Marina del Rey Slip Sizing Study ("Study") for public review and comment. DBH received five written comments from various Marina del Rey stakeholders and provided these comments to NCI for review. The following outlines specific responses to public comments provided to NCI followed by a summary of the limited changes made to the Study. The full text of public comments along with DBH's response to each is also included at the end of Appendix D.

RESPONSE TO COMMENTS

Marina del Rey Lessees Association – The Lessees Association provided twelve comments to NCI's Study:

1. Page 1: Bullet Point #4: The report states that "More boats in the 30 feet length and less category are moving to dry boat storage." The consultant should be asked to quantify the number of boats under 30 feet that are moving to dry stack storage.

   Response: NCI has corrected the Study to say, "More boats in the 30 feet length and less category are expected to move to dry boat storage."

2. Page 2: Table: We believe the Table requires more clarity. Does this Table mean that an individual marina should not have any slips under 30 feet when redeveloped? Does this include dry slips? What does it mean that the Table shows an apparently uneven redistribution of the percentages for the maximum case percentage for individual marinas? For instance, the 11% of slips 50 feet and over remains static, while all other categories 30 feet and above are adjusted upward.

   Response: This table implies that when combining all of the MDR marinas (not dry storage; these are not marinas) that 30% of these slips be for boat lengths of 30 feet or less, however there also can be a higher percentage of the smaller slip sizes as shown in Table 8. Also, page 34 states that these percentages should not be considered as absolute. This table does not say that an individual reconfigured marina should not have any slips under 30 feet in length; it only says that it is okay to have zero slips under 30 feet as long as there are still at least 30% of the total MDR slips available in this size. The table recommends that the total distribution of boat slips 50 feet and longer should not exceed 11% for all MDR marinas and also for individual reconfigured marinas as well.

3. Page 2: Table: The Table along with the associated recommendations outlined in the Executive Summary, also fails to account for the fact that several anchorages, acting

upon prior County policies, have already submitted proposals which minimize the potential for reconfiguration. The County has reserved the highest proportion of larger slips to those future projects which were not required to respond to prior invitations for Lease Extensions, and the County should reconsider the practical application of this policy.

Response: The County has not reserved any proportion of slip sizes for future projects.

4. Page 2: Since the Coastal Commission has recommended eliminating the Funnel Concept, and the recreational boating groups and environmental groups oppose it, then perhaps it should not be mentioned as a viable alternative.

   Response: The funnel concept is only referenced as one option in order to add additional slips in MDR on the basis that adequate boat navigation is still maintained.

5. Page 3: Bullet Point #1: We should insert the word "substantially" before "meet the minimum requirements…" as the DBAW guidelines and the County's design criteria for Marina del Rey are actually just guidelines and not requirements.

   Response: The DBAW guidelines include both recommendations and requirements. The minimum requirements for both DBAW and the County should be met as these are requirements, not recommendations, unless the Agencies agree to special exceptions after review, therefore the word "substantially" will not be inserted when referring to "minimum requirements".

6. Page 4: Where has Marina del Rey become "a role model for other urban marinas throughout the world"?

   Response: NCI has corrected the Study to say, "one of the successful urban marinas throughout the world".

7. Page 6: The proposed slip count relies on the proposed dry stack projects at parcel 53 and 44 actually being constructed. Should these not be constructed the slip count will be reduced to 4,871 rather than to 5,343, resulting in a 677 slip reduction that represents a 12.2% decrease.

   Response: Both the existing and proposed wet and dry boat storage totals are included. The Study does not assume or state that the proposed wet and dry boat storage will occur. It states that based on what is currently proposed, at the time of the Study, what the total would become when including the currently proposed wet and dry boat storage. The basis of this Study was set forth; that both the existing and the currently known proposed slip counts were considered.

8. Page 7: It is important to note that <u>only</u> the currently proposed slip reconfigurations are included in this report. There are four marinas representing 894 slips which will have to be reconfigured in the next few years. In addition, there are two other marinas reconfigured in the 1980's which will be up for reconfiguration in the next decade, representing another 526 slips.

   Response: The report does state that the "currently proposed" slip reconfigurations are the ones being considered in this Study. Page 19 provides a listing of the currently proposed marina slip reconfigurations that were considered in this Study, and refers to these eight as currently proposed. It also states that only one of these eight, at the time of this Study, had received final approval while the other seven were in various stages of the approval process. This report also states that the purpose of this Study is to present recommendations for MDR marinas being replaced and reconfigured during the next 40 years (i.e. pages 4 and 34).

9. Page 25: Boat registration numbers change by size categories. Do these numbers of registrations for smaller boats include personal watercraft? If so, the personal watercraft registrations should be removed, because they skew the numbers in favor of smaller slips for vessels that do not require small boat slips.

   Response: The presented boat registration numbers are national numbers for all registered boats shown within the size categories. There was no presented numbers of personal watercraft that may have been included within these numbers that were available from the data sources utilized. These registration numbers, over the years available, were only used to illustrate that the larger size vessels have the higher percentage increase in vessel registration. Any personal watercraft that may or may not have been included within the "under 16 feet" size category would not change this result.

10. Page 37: It is inconsistent with the recommendations of this study that the existing dry boat storage on parcel 77 should be eliminated.

    Response: This Study does not recommend that the existing dry boat storage on Parcel 77 be eliminated; it states that this dry boat storage will be eliminated.

11. Page 37: The report identifies Parcel 52/GG to provide dry stack storage for 349 boats and Parcel 44 to provide the same for 234 boats. These two projects are speculative in nature as they face many hurdles in obtaining entitlements in a protracted discretionary process, to say nothing of potential financing challenges.

    Response: The existing and proposed dry boat storage refers to Table 3 (page 10) which clearly states that both the Parcel 52/GG dry storage of 349 boats and the Parcel 44 dry storage of 234 boats are "proposed" dry boat storage counts.

12. The report has not addressed supportive landside services on marine/commercial properties to facilitate the use of visitor-serving commercial operations such as FantaSea and Hornblower.

    Response: The scope of work for this Study did not include addressing any supportive landside services.

Mr. Gregory F. Schem – Mr. Schem provided eight comments to NCI's Study. Mr. Schem's comments are identical to the Marina del Rey Lessees Association comments above and are addressed by the above responses.

Mr. Andy Bessette – Mr. Bessette provided general comments questioning the independence of the Study.

Response: The issue of NCI's independence was discussed at some length in the public meeting.

Mr. Raymond J. Fisher – Mr. Fisher provided general comments concerning the legitimacy of slip pricing increases in Marina del Rey.

Response: See response provided by ADK&A in the ADK&A report since slip pricing was not addressed in NCI's Study of slip sizes.

Mrs. Lynda and Mr. Wesley Little – Mr. and Mrs. Little provided general comments concerning the legitimacy of slip pricing increases in Marina del Rey.

Response: See response provided by ADK&A in the ADK&A report since slip pricing was not addressed in NCI's Study of slip sizes.

Comments From Gregory F. Schem

Noble Study:

1. Page 1: Bullet point # 4: The report states that "more boats in the 30 foot length and less category are moving to dry boat storage". Where is the back up for this conclusion? How many more boats are we talking about? Since there have been very few new dry storage facilitates constructed within the market area, has the study included nationwide data outside of the market? If.so, is this relevant to Marina del Rey.
2. Page 2: Table: Does this mean that an individual marina should not have any slips under 30 feet when re-developed? But if the combined percentage is recommended to b 30% or less, then how do we get there?
3. Page 2: in Since the Coastal Commission has recommended eliminating the Funnel Concept, and the recreational boating groups and environmental groups are opposed to it, then perhaps it should not be mentioned as a viable alternative.
4. Page 3: Bullet point #1: We should insert the word "substantially" before "meet the minimum requirements..." as they are actually just guidelines and not requirements. By providing some flexibility, major changes in configuration may not become necessary in order to comply. This may provide a very cost effective solution for maintaining existing slip counts. It only makes sense that guidelines maintain more flexibility then specific requirements.
5. Page 4: Where has Marina del Rey become a "role model" for other urban marinas throughout the world"? This seems overly presumptive for a factual report.
6. **Page 6: The proposed slip count relies in the proposed dry stack projects at parcel 53 and 44 actually being constructed. Should these not be constructed the slip count will be reduced to 4,871 rather than to 5,343 resulting in a 677 slip reduction representing a 12.2% decrease. Since these projects are far from even obtaining their basic entitlements and CEQA review, this study should not assume their completion is a fait accompli in its analysis of the base case. Most importantly, since the total slip count is the very basis of this reports fundamental conclusions, the validity and likelihood of these assumptions should be clearly set forth.**
7. Page 7: It is important to note that only the currently proposed slip reconfigurations are included in this report. There are four marinas representing 894 slips which will have to reconfigure in the next few years. In addition, there are two other marinas which reconfigured in the 1980's which will be up for reconfiguration in the next decade representing 526 slips. Together, this represents 1,420 slips or 27% of the marina which is not included in this study. The reconfiguration of these marinas will likely involve a similar reduction in boat slips and an increase in length as discussed in this report.
8. Page 37: It is inconsistent with the recommendations of this study that the existing dry storage on parcel 77 should be eliminated. Given the lower costs associated with the existing storage facility on this parcel, I would think the author would recommend retaining this use.

ADK&A Report:

1. Page 1: The word "proposed" should precede "dry storage facilities for smaller boats" in second paragraph under Key Findings. This is important given the speculative nature of the two dry

storage facilities which (as stated above) still face considerable economic and entitlement challenges.

2. Page 8: Boat yards (and I suspect hotels as well) do not maintain vacancy to accommodate customers and never have. Other than minimal staging areas for haul out, all slips are rented to slip tenants and/or leased to sub-tenants.
3. Page 9: The difference between the so called "independently priced marinas" and other marinas seems to be over blown. It is our experience that all marina slips compete with all other marina slips based upon their individual characteristics and amenities and not based upon whether there is a related upland business. This distinction should be further studied for its validity.

Marina del Rey
Lessees Association

C/o Mr. Timothy C. Riley, Executive Director
8537 Wakefield Avenue
Panorama City, CA 91402
Telephone: 818-891-0495; FAX: 818-891-1056

April 21, 2009

Mr. Santos Kreimann
Director
Department of Beaches and Harbors
13837 Fiji Way
Marina del Rey, CA 90292

Re: Marina del Rey Slip Sizing Study
Marina del Rey Slip Pricing and Vacancy Study

Dear Mr. Kreimann:

The Marina del Rey Lessees Association submits the following comments, questions and suggestions in the matter of the above-referenced studies commissioned by the County of Los Angeles Department of Beaches and Harbors.

<u>Marina del Rey Slip Sizing Study:</u>

1. Page 1: Bullet point # 4: The report states that "more boats in the 30 foot length and less category are moving to dry boat storage". While we concur that a greater number of smaller boats should be placed in dry stack storage, we do not find that the report provides sufficient data to reach this conclusion. The consultant should be asked to quantify the number of boats under 30 feet that are moving to dry stack storage. Since there have been very few new dry storage facilitates constructed within the market area, has the study included nationwide data outside of the market? If so, is this relevant to Marina del Rey?

2. Page 2: Table: We believe the Table requires more clarity. Does this Table mean that an individual marina should not have any slips under 30 feet when re-developed? But if the combined percentage is recommended to be 30% or less, how is this achieved? If the first marinas to be redeveloped drop all boat slips under 30 feet, then do the last marinas to be developed take the entire burden of providing the under 30 foot slips in order to maintain the 30% ratio? What does the Table mean by saying 30% of the combined percentage for all MDR marinas is 30% for 30 feet and under? Does this include dry slips? What does it mean that the Table shows an apparently uneven redistribution of the percentages for the maximum case percentage for individual marinas? For instance, the 11% of slips 50 feet and over remains static, while all other categories 30 feet and above are adjusted upward.

3. The Table on page 2, along with the associated recommendations outlined in the Executive Summary, also fails to account for the fact that several anchorages, acting upon prior County policies, have already submitted proposals which minimize the potential for reconfiguration. The County has reserved the highest proportion of larger slips to those future projects which were not required to respond to prior invitations for Lease Extensions, and the County should reconsider the practical application of this policy.

4. Page 2: Since the Coastal Commission has recommended eliminating the Funnel Concept, and the recreational boating groups and environmental groups are opposed to it, then perhaps it should not be mentioned as a viable alternative.

5. Page 3: Bullet point #1: We should insert the word "substantially" before "meet the minimum requirements..." as the DBAW guidelines and the County's design criteria for Marina del Rey are actually just guidelines and not requirements. By providing some flexibility, major changes in configuration may not become necessary in order to comply. This may provide a very cost effective solution for maintaining existing slip counts. It only makes sense that guidelines maintain more flexibility then specific requirements.

6. Page 4: Where has Marina del Rey become a "role model" for other urban marinas throughout the world"? While we appreciate the uniqueness of Marina del Rey and its appeal to boaters, this type of presumptuous comment seems inappropriate for a factual report unless it is supported by a number of specific examples that could be cited.

7. Page 6: The proposed slip count relies on the proposed dry stack projects at parcel 53 and 44 actually being constructed. Should these not be constructed the slip count will be reduced to 4,871 rather than to 5,343, resulting in a 677 slip reduction that represents a 12.2% decrease. Since these proposed dry stack projects are far from even obtaining their basic entitlements and CEQA review, this study should not assume their completion is a fait accompli in its analysis of the base case. Most importantly, since the total slip count is the very basis of this report's fundamental conclusions, the validity and likelihood of these assumptions should be clearly set forth.

8. Page 7: It is important to note that <u>only</u> the currently proposed slip reconfigurations are included in this report. There are four marinas representing 894 slips which will have to be reconfigured in the next few years. In addition, there are two other marinas reconfigured in the 1980's which will be up for reconfiguration in the next decade, representing another 526 slips. Together, these marinas represent a total of 1,420 slips or 27% of the marina which is not included in this study. The reconfiguration of these marinas will likely involve a

similar reduction in boat slips and an increase in length as discussed in this report.

9. Page 25: Boat registration number change by size categories. Do these numbers of registrations for smaller boats include personal watercraft? If so, the personal watercraft registrations should be removed, because they skew the numbers in favor of smaller slips for vessels that do not require small boat slips.

10. Page 37: It is inconsistent with the recommendations of this study that the existing dry storage on parcel 77 should be eliminated. Given the lower costs associated with the existing storage facility on this parcel, it would appear that the sensible recommendation is to retain this existing use.

11. Page 37: The report identifies Parcel 52/GG to provide dry stack storage for 349 boats and Parcel 44 to provide the same for 234 boats. Together, these two proposed dry stack storage facilities would provide more than half of Marina del Rey's total dry slips. These two projects are speculative in nature as they face many hurdles in obtaining entitlements in a protracted discretionary process, to say nothing of potential financing challenges.

12. The report has not addressed supportive landside services on marine/commercial properties to facilitate the use of visitor-serving commercial operations such as FantaSea Yacht and Hornblower. We recommend that the report discussion on the future marina should focus on providing these necessary supportive landside facilities for operators, large and small, who have licensed businesses.

<u>Marina del Rey Slip Pricing and Vacancy Study</u>

1. Page 1: Under "Key Findings of the Noble Consultants Report," the word "proposed" should precede "dry storages for smaller boats" in the last sentence of the first paragraph. This is important given the speculative nature of the two proposed dry storage facilities, which (as stated above under Item 11) still face considerable economic and entitlement challenges.

2. Page 8: Boat yards and other marina operators do not maintain vacancy to accommodate customers or for the purpose of other collateral uses. Other than minimal staging areas for haul out, all slips are rented to slip tenants and/or leased to sub-tenants.

3. Page 9: The difference between the so called "independently priced marinas" and other marinas seems to be overblown. It is our experience that all marina slips compete with all other marina slips based upon their individual

characteristics and amenities and not based upon whether there is a related upland business. This distinction should be further studied for its validity.

As an interested party to the redevelopment of Marina del Rey to serve our boating community and to enhance our recreational facilities, the Marina del Rey Lessees Association appreciates the independent study efforts that will assist in rebuilding our marinas to modern standards. We believe that these reports substantiate, to a large degree, what other studies have previously found, namely that Marina del Rey is in line with the marketplace and that the trend is to larger wet slips.

We look forward to working with the County as these studies move forward during the public review process.

Sincerely,

David O. Levine
President

(letter transmitted by email)

Paul Wong

From: wl [ragazza@verizon.net]

Sent: Monday, April 06, 2009 10:33 PM

To: Paul Wong

Subject: Comments to Draft Slip Pricing and Vacancy Report

To Whom it May Concern:

I would like to offer our household's comments regarding the issue of slip pricing in Marina Del Rey.

I have kept sailboats in the marina since 1986. Initially in the county's mast-up storage, and then subsequently in 1997 at the Marina Del Rey Hotel Marina.

Over the last 22 months, I have watched my current leaseholder; Almar, increase my rent by 39%. Has the CPI risen by that much? Have groceries increased by that much? Has anything (Including salaries) increased by that much over such a short period of time? Why then, does the county allow this kind of price gouging?

The current proposed rate of $477/mo for a 30' slip exceeds the costs for similar-sized slips in five other marinas both in MDR and in King Harbor. This is not fair-market pricing, but rather a means to force out the "Little guy" and replace him with more and more of the wealthy few who keep a boat as a business expense, and use it very little. Excess profiteering appears to be the other possible motive behind these increases. Have any of the prior four increases been used to upgrade this LA County asset? I haven't seen one change other than flowers in the bathrooms. The showers are still disgusting mildew-ridden spaces, and the docks are incredibly old and uneven.

Would the county consider leasing parts of Griffith Park, or developing condos at Dockweiler Beach? No, because these are public assets meant for the ENTIRE populace of LA County to enjoy. MDR should be viewed just the same. You can't put a price on the only county recreational boating area for millions of county residents. By allowing these unjustifiable increases, that is exactly what is happening.

Thank you for your time. I hope you'll strongly consider my views.

Sincerely,

Wesley and Lynda Little
41163 Rimfield Dr
Palmdale CA 93551

RAYMOND J FISHER
13080 MINDANAO WAY #98
MARINA DEL REY, CA. 90292
TEL: (310) 823-4488 FAX (310)823-8559
E-Mail: raymondjfisher@gmail.com or ray@starbizmgmt.com

Via mail
Via fax (31)821-6345

Department of Beaches and Harbors
MAR 16 '09

March 15, 2009

Santos H. Kreimann Director
Los Angeles County Beaches & Harbor
13837 Fiji Way
Marina Del Rey
California 90292

Dear Mr Kreimann:

I had the "experience of attending the meeting on Wednesday March 11, 2009 at Burton Chase Park. I had the opportunity to address you and the Board but unfortunately I feel I was not clear in precise on my "presentation" I had undergone a length MRI that day and was in pain & very tired.

I would like the opportunity to set forth in writing my points, evaluation, and comments in writing to be sure that my feelings and comments are of a more permanent record. I would firstly like to commend you with for your work in what seems to be a very difficult matter. I feel that you will most likely make some much needed changes and improvements as expeditiously as possible.

I have been a tenant of Marina Del Rey Hotel Slips since 1988. I have a 48ft Yacht and consider myself a "large boat owner" in fact I have been trying to purchase a larger boat (70" for a number of years).
I also feel that way to much attention is given to "small boat owners" It seems nothing gets done because of inaccurate outrage of small boat owners not being able to find a slip. I know for a fact there are always vacancies for small boat owners and in fact it seems now and your survey proves it. The small boat owner has more than enough availability. The large boat owner must be given some input and consideration in this matter

When I first rented my slip at the Hotel (1988) I was told that the slips would be substantially improved or replaced within a couple of years. Quite honestly not only has **NOTHING** been done but the slips are now almost dangerous. What adds "insult to injury" is that my slip rents have increases by an enormous amount since inception and **NOW** I have been advised of another 16% plus increase. I was mistakenly patient from 1988 thru 2000 for improvements or replacement. However when Almar Management, Inc. took over a few years ago the increase started again with **AGAIN** the assurance of new docks.

What I am upset is that, they/you can increase the rent stating they will be replacing the docks **OR** replacing the docks **THEN** raising the rent. **YOU CANNOT DO BOTH!!!!!!**

I have had a number of conversations with Jim Hayes the V.P. of operations for Almar who seems to be also frustrated and get the feeling that their "hands are tied" as they need approval from the County. If this is true and based on the meeting last week I must make you aware the County is jeopardizing a major asset in income revenue and tourist appeal in a major way. Its time to maker this marina the "showcase" it should be. This alone will substantially increase revenues for the County. I am getting the feeling and taking to other boaters they are getting tired of **"nothing being done" for 20 years** and will either move their boat to another marina or possibly give up boating.

As now a retired accountant /business manager, while I appreciate the "survey" I find that it only gives an indication of the status. As an accountant I have many times been asked the question. **What is two plus two? My answer is "what do you want it to be!** I find that the survey should have made adjustments for Newport as it is a very affluent area plus it should include San Diego area due to substantial amount of docks, slips & boats. Also San Francisco area is not compatible and should be eliminated.

Lastly I would like to offer my services, (obviously gratis) to assist in this seems to be a "monumental task" I have many contacts City, County & Federal that maybe of some assistance in this matter. Maybe some of the promised "stimulus monies "that we all need can be used to expedite this matter.

Respectfully submitted

Raymond J Fisher

Paul Wong

From:	andy bessette [bessette_andy@yahoo.com]
Sent:	Wednesday, April 22, 2009 10:05 AM
To:	Paul Wong
Subject:	slip size and pricing studies
Follow Up Flag:	Follow up
Flag Status:	Red

Hello Paul,

following are my comments regarding the recent slip size and pricing studies:

These studies are a complete fabrication, ordered virtually word-for-word by the developers, purposely laden with misinformation, erroneous data and conclusions, their principle intent being to mislead the public and lend credence to the county's pitiful planning, cover-up their price gouging, and hide the decimation of small boat slips and the gentrification of this marina. The pricing study does not represent what is now being paid by slip renters, but has been created to increase the lessees' property values and force out the boaters of normal or modest means.

The sizing study has been written to deliberately hide the true numbers of slips lost due to the developers' land-grabbing of the related boat-owner parking; to disguise the county's failure to honestly manage this marina; and to glorify the developers' rapacious redevelopment plans. In a word, it shows to what lengths the county is willing to stoop...in their desperation for money. And it showcases the level of corruption which has become "acceptable" to the leaders of our unfortunate community, and their indifference to the needs of the boaters for whom the marina was built.

Shame on you all.

Respectfully,

Andy Bessette
Marina Boatowners Association

To enrich lives through effective and caring service

LOS ANGELES COUNTY
Department of
Beaches &
Harbors

Santos H. Kreimann
Director

Kerry Silverstrom
Chief Deputy

May 4, 2009

Mr. Gregory F. Schem, Managing Director
Harbor Real Estate, L.P.
13555 Fiji Way
Marina Del Rey, CA 90292

COMMENTS REGARDING MARINA DEL REY SLIP SIZING STUDY AND MARINA DEL REY SLIP PRICING AND VACANCY STUDY

Dear Mr. Schem:

We are in receipt of your e-mail setting forth your comments regarding the Marina Del Rey Slip Sizing Study and the Marina Del Rey Slip Pricing and Vacancy Study. We have reviewed your comments and have forwarded them to our consultants for their review. If our consultants find the data and information you provided to us useful, they will include it in the studies. Also, we intend to request our consultants to attach your comments to the studies as an exhibit.

Thank you for your input.

Very truly yours,

SANTOS H. KREIMANN, DIRECTOR

Paul Wong, Chief
Asset Management Division

13837 Fiji Way • Marina del Rey • CA 90292 • 310.305.9503 • fax 310.821.6345 • internet: http://marinadelrey.lacounty.gov

May 4, 2009

Mr. David O. Levine, President
Marina Del Rey Lessees Association
c/o Mr. Timothy C. Riley, Executive Director
8537 Wakefield Avenue
Panorama City, CA 91402

COMMENTS REGARDING MARINA DEL REY SLIP SIZING STUDY AND MARINA DEL REY SLIP PRICING AND VACANCY STUDY

Dear Mr. Levine:

We are in receipt of your April 21, 2009, letter setting forth your comments, questions, and suggestions regarding the Marina Del Rey Slip Sizing Study and the Marina Del Rey Slip Pricing and Vacancy Study. We have reviewed your data, comments, and suggestions and have forwarded them to our consultants for their review. If our consultants find the data and information you provided to us useful, they will include it in the studies. Also, we intend to request the consultants to attach your comments to the studies as an exhibit.

Thank you for your input.

Very truly yours,

SANTOS H. KREIMANN, DIRECTOR

Paul Wong, Chief
Asset Management Division

To enrich lives through effective and caring service

Los Angeles County
Department of Beaches & Harbors

Santos H. Kreimann
Director

Kerry Silverstrom
Chief Deputy

May 4, 2009

Mr. Wesley Little and Mrs. Lynda Little
41163 Rimfield Drive
Palmdale, CA 93551

COMMENTS REGARDING MARINA DEL REY SLIP SIZING STUDY AND MARINA DEL REY SLIP PRICING AND VACANCY STUDY

Dear Mr. and Mrs. Little:

Thank you for submitting comments regarding the Marina Del Rey Slip Sizing Study and the Marina Del Rey Slip Pricing and Vacancy Study. We appreciate your participation in the public comments portion of the two above-mentioned studies. We intend to request the consultants to attach your comments to the studies as an exhibit. Your specific concerns regarding your slip fee increase were addressed in a separate letter sent to you on March 26, 2009.

Thank you for your input.

Very truly yours,

SANTOS H. KREIMANN, DIRECTOR

Paul Wong, Chief
Asset Management Division

13837 Fiji Way • Marina del Rey • CA 90292 • 310.305.9503 • fax 310.821.6345 • internet: http://marinadelrey.lacounty.gov

To enrich lives through effective and caring service

Los Angeles County
Department of Beaches & Harbors

Santos H. Kreimann
Director

Kerry Silverstrom
Chief Deputy

May 4, 2009

Mr. Raymond J. Fisher
13080 Mindanao #98
Marina Del Rey, CA 90292

COMMENTS REGARDING MARINA DEL REY SLIP SIZING STUDY AND MARINA DEL REY SLIP PRICING AND VACANCY STUDY

Dear Mr. Fisher:

Thank you for your participation with the public review portion of the two above-mentioned studies. Specifically, we appreciate you for coming to the March 11, 2009, meeting and for your March 15, 2009, letter setting forth your comments regarding the Marina Del Rey Slip Sizing Study and the Marina Del Rey Slip Pricing and Vacancy Study. It is very important for us to hear from the public, and we appreciate individuals like you who take the time to come forward with comments.

We intend to request our consultants to attach your comments set forth in your letter as an exhibit to the studies. Thank you again for your participation.

Very truly yours,

SANTOS H. KREIMANN, DIRECTOR

Paul Wong, Chief
Asset Management Division

13837 Fiji Way • Marina del Rey • CA 90292 • 310.305.9503 • fax 310.821.6345 • internet: http://marinadelrey.lacounty.gov

Paul Wong

From: Paul Wong
Sent: Wednesday, May 06, 2009 7:53 AM
To: 'andy bessette'
Subject: RE: slip size and pricing studies

Hello, Andy:

We have received your comments regarding the Marina del Rey Slip Sizing Study and the Marina del Rey Slip Pricing and Vacancy Study. We intend to request the consultants to attach your comments to the studies as an exhibit.

Paul Wong
(310) 305-9512

From: andy bessette [mailto:bessette_andy@yahoo.com]
Sent: Wednesday, April 22, 2009 10:05 AM
To: Paul Wong
Subject: slip size and pricing studies

Hello Paul,

following are my comments regarding the recent slip size and pricing studies:

These studies are a complete fabrication, ordered virtually word-for-word by the developers, purposely laden with misinformation, erroneous data and conclusions, their principle intent being to mislead the public and lend credence to the county's pitiful planning, cover-up their price gouging, and hide the decimation of small boat slips and the gentrification of this marina. The pricing study does not represent what is now being paid by slip renters, but has been created to increase the lessees' property values and force out the boaters of normal or modest means.

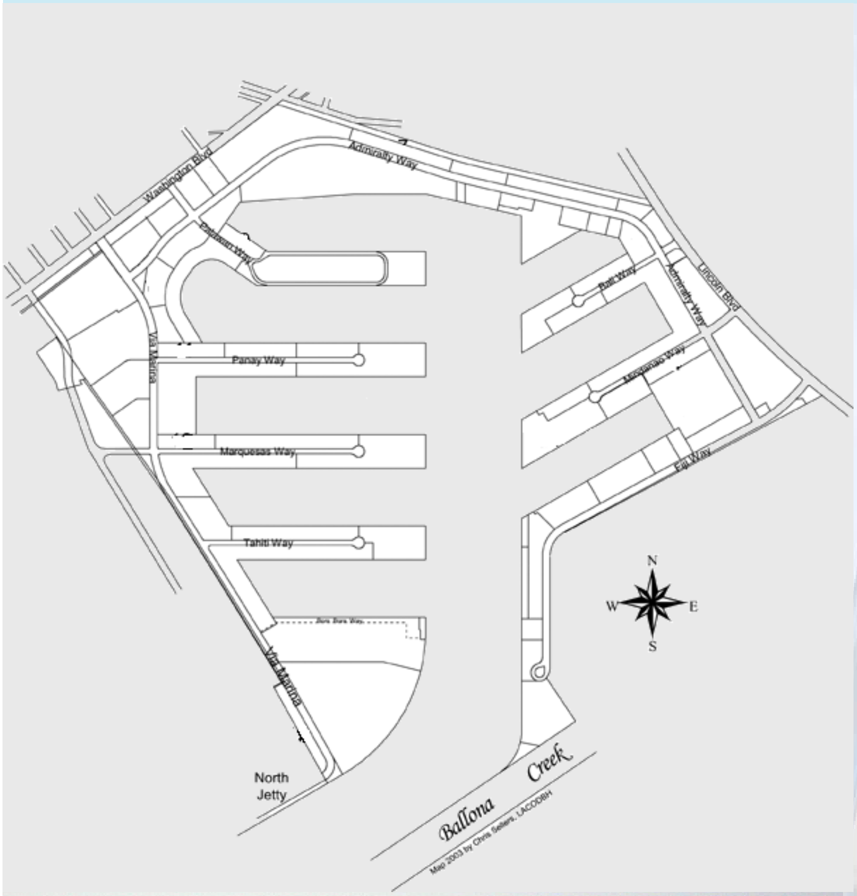
The sizing study has been written to deliberately hide the true numbers of slips lost due to the developers' land-grabbing of the related boat-owner parking; to disguise the county's failure to honestly manage this marina; and to glorify the developers' rapacious redevelopment plans. In a word, it shows to what lengths the county is willing to stoop...in their desperation for money. And it showcases the level of corruption which has become "acceptable" to the leaders of our unfortunate community, and their indifference to the needs of the boaters for whom the marina was built.

Shame on you all.

Respectfully,

Andy Bessette
Marina Boatowners Association

DRAFT
TRAFFIC STUDY
FOR THE MARINA DEL REY
LOCAL COASTAL PROGRAM AMENDMENT



Prepared for:

Los Angeles County Department of Beaches & Harbors

April 29, 2010

Submitted by :

RAJU Associates Inc

DRAFT

TRAFFIC STUDY

FOR THE

MARINA DEL REY LOCAL COASTAL PROGRAM AMENDMENT

Prepared for:

COUNTY OF LOS ANGELES DEPARTMENT OF BEACHES AND HARBORS

Prepared by:

RAJU ASSOCIATES, INC.
524 S. Rosemead Boulevard
Pasadena, California 91107
(626) 792-2700

Ref: RA 291

PREFACE

The Los Angeles County Department of Beaches and Harbors contracted with Raju Associates, Inc. to prepare a comprehensive traffic study for the Marina del Rey area for amendments to the Local Coastal Program (LCP). The purpose of this study was to provide an accurate picture of traffic volumes and flows in the Marina del Rey area that are currently occurring and identify potential transportation improvement measures for new development by Marina lessees. Five projects, also called “pipeline projects” have been identified and traffic conditions within the Marina that result from land use and location changes due to the five pipeline projects within the context of the overall approved buildout of the Marina have been studied. Changes to the transportation mitigation measures in the approved LCP as well as creation of three major development zones (MDZs) have also been identified as components of this LCP Amendment.

The currently-approved Marina del Rey Local Coastal Program (LCP) consists of a Land Use Plan (LUP) and a Local Implementation Program (LIP). The LUP establishes land use policy for the Marina, while the LIP provides the needed guidelines and regulations for new development. The proposed amendment to the LCP would facilitate the following three changes to the approved LCP for Marina del Rey - land use changes to types, sizes and locations required by the five pipeline projects; associated and other transportation improvement measures to support the proposed overall development; and the creation of the three major development zones (MDZs) to facilitate orderly and monitored development of potential buildout of the Marina.

The last comprehensive traffic study performed for Marina del Rey was completed in 1994 and incorporated into the LUP by reference. Since that time, traffic patterns and volumes have changed in the Marina del Rey area. The land uses contained in the LUP are also being updated. Therefore, the LCP will be subject to an amendment process. This Raju Associates study and other relevant documents will be used to revise the LUP’s circulation chapter and to establish phasing and funding requirements for new development in the Marina.

This traffic study includes many sets of tests of the pipeline projects and overall buildout of the marina with and without improvements, and comparisons of the projected performance of the analysis locations under these scenarios to comparable conditions estimated in the 1991–94 DKS study. The analyses also reveal the projected transportation system performance under various scenarios. These analyses and comparisons inform the citizens, planners and decision-makers about the projected performance of the transportation system in light of all the proposed changes inclusive of the proposed transportation improvement measures, relative to the projected conditions that were approved in the 1991–94 DKS study.

Many individuals have been involved in the development and subsequent analysis and review of this traffic study. Srinath Raju managed the project for Raju Associates with support from Christopher Muñoz, Sowmya Maya and Chi Phan. The contract was managed by Barry Kurtz from the Los Angeles County Department of Beaches and Harbors. Michael Tripp from Los Angeles County Department of Regional Planning provided detailed input to the study. William Winter and Jeff Pletyak from the Los Angeles County Department of Public Works participated in the study and gave input. Finally, Barry Kurtz and Charlotte Miyamoto from the Los Angeles County Department of Beaches and Harbors provided extensive review and valuable insights.

It is worth noting that this study is the product of extensive public agency review and coordination. This document will provide planners and decision-makers with the required data and analytics needed to promote informed discussions relative to transportation system implications of the proposed amendment project (consisting of the five pipeline projects, associated transportation improvements, and creation of the three major development zones).

ACRONYMS

ATCS – Adaptive Traffic Control System

ATSAC – Automated Traffic Surveillance and Control

CALCADB – Computer Assisted Level of Service Calculations and Database

CC – Culver City

CE – Los Angeles Department of Transportation Commuter Express

CMA Methodology – Critical Movement Analysis Methodology

I – Interstate

ITE – Institute of Transportation Engineers

LACDBH – Los Angeles County Department of Beaches and Harbors

LACMTA – Los Angeles County Metropolitan Authority

LADOT – Los Angeles Department of Transportation

LCP – Local Coastal Program

LIP – Local Implementation Program

LOS - Level of Service

LUP – Land Use Plan

MDZ – Major Development Zone

RTP – Regional Transportation Plan

SCAG – Southern California Association of Governments

SM – Santa Monica Big Blue Bus

SR - State Route

V/C Ratio – Volume to Capacity Ratio

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

APPENDICES
VOLUME II (PROVIDED UNDER A SEPARATE COVER)

A INTERSECTION LANE CONFIGURATIONS

B TRAFFIC COUNTS

C EXISTING (2009) CONDITIONS TRAFFIC VOLUMES AND LEVEL OF SERVICE WORKSHEETS

D FUTURE (2020) WITH AMBIENT GROWTH CONDITIONS TRAFFIC VOLUMES AND LEVEL OF SERVICE WORKSHEETS

E APPROVED LCP DEVELOPMENT AND PROPOSED LCP AMENDMENT DEVELOPMENT INFORMATION

F AMBIENT (2020) CONDITIONS WITH PIPELINE PROJECTS TRAFFIC VOLUMES AND LEVEL OF SERVICE WORKSHEETS

G AMBIENT (2020) CONDITIONS WITH PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS) TRAFFIC VOLUMES AND LEVEL OF SERVICE WORKSHEETS

H RELATED PROJECTS INFORMATION

I CUMULATIVE (2020) CONDITIONS TRAFFIC VOLUMES AND LEVEL OF SERVICE WORKSHEETS

J CUMULATIVE (2020) CONDITIONS WITH PIPELINE PROJECTS TRAFFIC VOLUMES AND LEVEL OF SERVICE WORKSHEETS

K CUMULATIVE (2020) CONDITIONS WITH PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS) TRAFFIC VOLUMES AND LEVEL OF SERVICE WORKSHEETS

L TRANSPORTATION MITIGATION PROGRAM IN THE APPROVED LCP

M AMBIENT (2020) CONDITIONS WITH PIPELINE PROJECTS AND IMPROVEMENTS TRAFFIC VOLUMES AND LEVEL OF SERVICE WORKSHEETS

N AMBIENT (2020) CONDITIONS WITH PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS) AND IMPROVEMENTS TRAFFIC VOLUMES AND LEVEL OF SERVICE WORKSHEETS

O CUMULATIVE (2020) CONDITIONS WITH PIPELINE PROJECTS AND IMPROVEMENTS TRAFFIC VOLUMES AND LEVEL OF SERVICE WORKSHEETS

P CUMULATIVE (2020) CONDITIONS WITH PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS) AND IMPROVEMENTS TRAFFIC VOLUMES AND LEVEL OF SERVICE WORKSHEETS

EXECUTIVE SUMMARY

A detailed traffic study has been performed by Raju Associates, Inc. to assess the proposed Marina del Rey Local Coastal Program (LCP) Amendment conditions and provide direction relative to improvement measures that may be required to alleviate traffic conditions within the Marina del Rey area of Los Angeles County, California. This Aggregate Amendment to the LCP is being prepared to accommodate the changes to the land use and their locations due to the five "Pipeline Projects" as well as the changes to the transportation improvement measures being currently contemplated as part of the amendment. All these changes due to the Pipeline Projects and transportation improvement updates have been aggregated into a single amendment. This aggregate approach was endorsed by both the Los Angeles County Board of Supervisors and the California Coastal Commission and its staff.

The Marina del Rey Land Use Plan provides direction relative to future development potential within various development zones in Marina del Rey. These development zones currently consist of several parcels, each. For the purposes of the aggregate amendment to the LCP future development potential in Marina del Rey has been reallocated into three Major Development Zones (MDZs). Within a MDZ, the various parcels' land uses and resulting trip generation have been aggregated for the purposes of analyzing traffic movements and effects. This study provides a basis for analyzing traffic effects from proposed development in the Marina del Rey study area and provides an analysis of these effects and improvement measures. The zones are designed to isolate traffic effects on individual intersections in the Marina.

The MDZs including the associated parcels and the amount of potential development allocated to each MDZ have been summarized in this study. The potential development includes the redevelopment remaining from the approved development permitted in the LCP and the development that has been granted but not built. The Major Development Zones and the parcels included within each of them are presented in Figure AA.

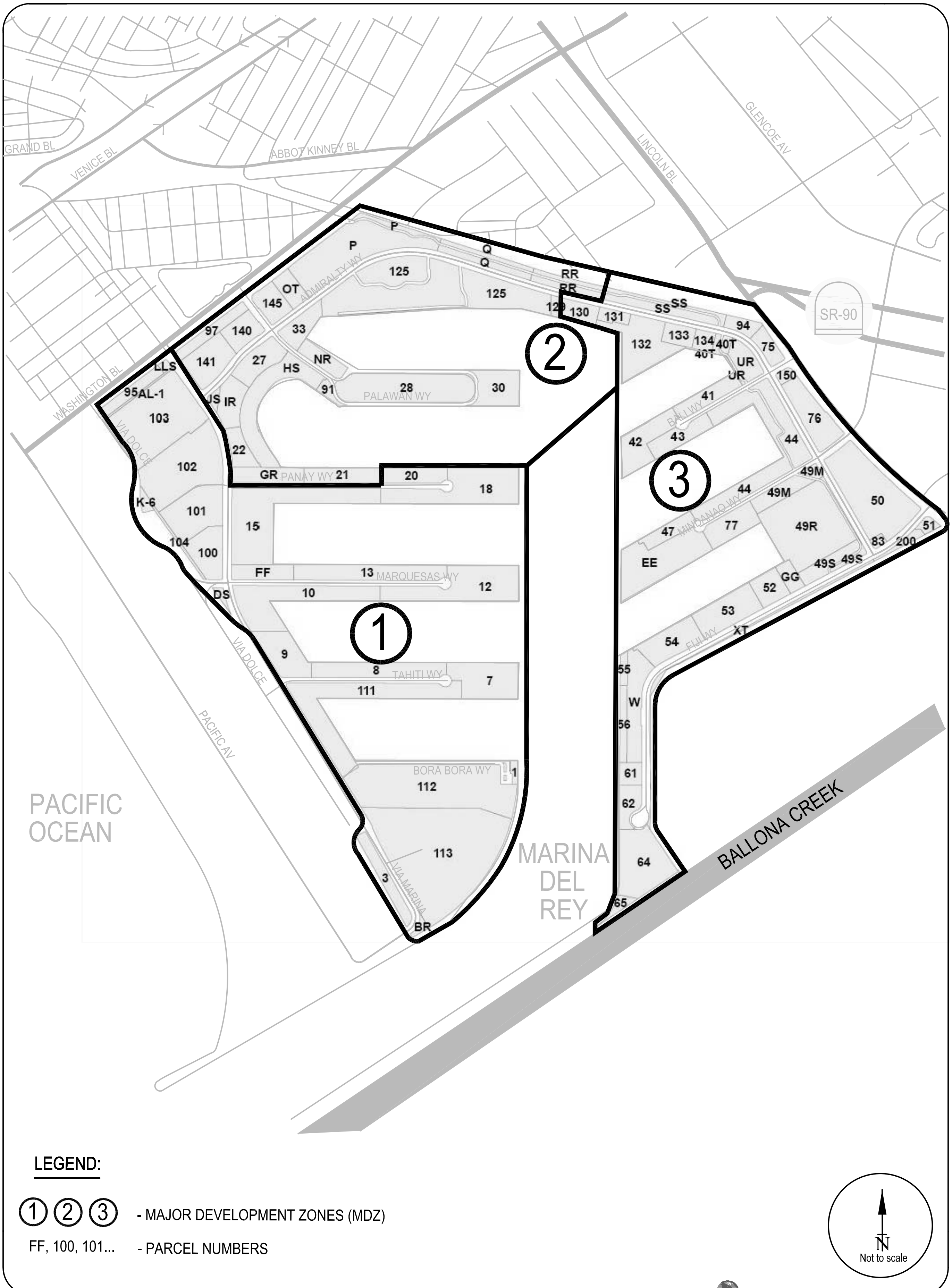


FIGURE AA
MAJOR DEVELOPMENT ZONES (MDZ) IN MARINA DEL REY

RAJU Associates, Inc.

A summary of the overall development potential is included below:

Proposed Local Coastal Program Buildout - Overall Total Potential Development

- Residential Units: 2,044 dwelling units
- Hotel: 505 rooms
- Visitor-Serving Commercial: 273,741 square feet of retail space
- Restaurant: 1,323 restaurant seats
- Congregate Care: 129 dwelling units
- Office: 26,000 square feet of office space
- Dry Stack: 375 spaces
- Library: 3,000 square feet
- Ferry Terminal Site
- Fire Station Expansion

There are five Pipeline Projects that are being proposed that require LCP amendments. These five projects that require LCP amendments are being aggregated into a single amendment. The aggregate approach was endorsed by both the Los Angeles County Board of Supervisors and the California Coastal Commission and its staff. The five Pipeline Projects are described below:

- Parcels 10–FF: 536 dwelling units replacing 136 dwelling units, a net total of 390 dwelling units.
- Parcels 33–NR: 292 dwelling units, 32,400 square feet of retail space, 323 restaurant seats and 69 public parking spaces, replacing 191 public parking spaces.
- Parcels OT–21: Parcel OT includes 114-room senior active accommodations, 5,000 square feet of retail space and 92 public parking spaces. OT currently has 186 public parking spaces, 92 of which will remain in OT and 94 spaces will be built in Parcel 21; Parcel 21 includes a net increase of 6,000 square feet of office space, a net decrease of 6,000 square feet of health club and 94 public parking spaces, Parcel 21 also includes 2,300 square feet of office space and 5,000 square feet of yacht club transferred from Parcel 20.
- Parcels 49–77: Option 1 -135,000 square feet of visitor-serving commercial space; Option 2 – 116,495 square feet of visitor-serving commercial space and 255 dwelling units; Option 3 – Up to 26,000 square feet of office use (Department of Beaches and Harbor Administration Building) with either Option 1 or Option 2.

- Parcels 52-GG: 375 dry stack spaces, 3,080 square feet of office use and 3,350 square feet of Sheriff's boatwright shop (existing).

The primary purpose of this study is to provide updated information and data to the Los Angeles County Department of Beaches and Harbors, Department of Public Works and Department of Regional Planning for amending the Local Coastal Program (LCP) and to determine the changes in conditions since the 1991-1994 DKS Traffic Studies were completed.

The following key tasks were performed as part of this study:

- Review of existing and past studies within the study area
- Reviewed all traffic models constructed in the region, including the DKS Traffic Study model, the updated SCAG model, the Playa Vista models and the model for the LAX Master Plan
- Update of existing traffic conditions in the study area
- Development of traffic forecasts and analyses of future conditions with and without the Proposed LCP Amendment
- Evaluation of improvement measures to alleviate traffic conditions resulting from the Proposed LCP Amendment

Twenty intersections within Marina del Rey and the City of Los Angeles have been analyzed in this study. These include the same nineteen locations that were analyzed in the original Marina del Rey Local Coastal Plan Traffic Study, January 1991, and Marina del Rey Local Coastal Plan Traffic Study Addendum, May 1994, prepared by DKS Associates (1991-1994 DKS Study) plus the intersection of Washington Boulevard at Palawan Way. Analysis of traffic operations at these intersections for various scenarios have been conducted and compared to those presented in the 1991-1994 Study. Details of the findings of this analysis and comparison are provided below.

- The study area for this project is bounded by Washington Boulevard on the north, Jefferson Boulevard on the south, Pacific Ocean on the west and Lincoln Boulevard on the east. These locations fall within the County of Los Angeles and City of Los Angeles. Also included are the intersections of SR 90 and Mindanao Way.

- Current traffic counts were conducted at each of the analysis intersections during both the morning and evening peak hours. A comparison of these counts with those conducted in the 1991-1994 DKS Study indicate that the current traffic counts have decreased overall by 5% and 8% during the morning and evening peak hours, respectively. This implies that the ambient growth projected in the 1991-1994 DKS Study has not occurred in this region.

- Currently, all 20 of the analyzed intersection locations are operating at levels of service (LOS) D or better during the morning and evening peak hours, with 19 of them operating a LOS C or better. Typically, in urban areas, LOS D is considered as acceptable operations. In the 1991–1994 DKS Study, "existing conditions" analysis identified that 3 locations during the morning peak hour and 9 locations during the evening peak hour were operating at congested or failing levels of service (LOS E or F). A comparison between the two indicates that the current operations at all of the analysis locations are equivalent to or better than the base conditions projected in the 1991–1994 DKS Study.

- In the Future Ambient (2020) conditions, all 20 locations in the morning peak hour and 19 of the 20 locations in the evening peak hour are projected to operate at LOS D or better. One intersection is projected to operate at LOS E. The Future Ambient (2020) conditions has been forecast to operate better than the Future Ambient (2010) conditions projected in the 1991–1994 DKS Study during both the morning and evening peak hours at all of the analyzed intersections.

- The Proposed Pipeline Projects' trip generation would result in a total of approximately 1,163 trips (610 inbound, 553 outbound) during the evening peak hour. The Pipeline Projects account for approximately 46% of the overall LCP Buildout remaining (unbuilt) uses' trip generation.

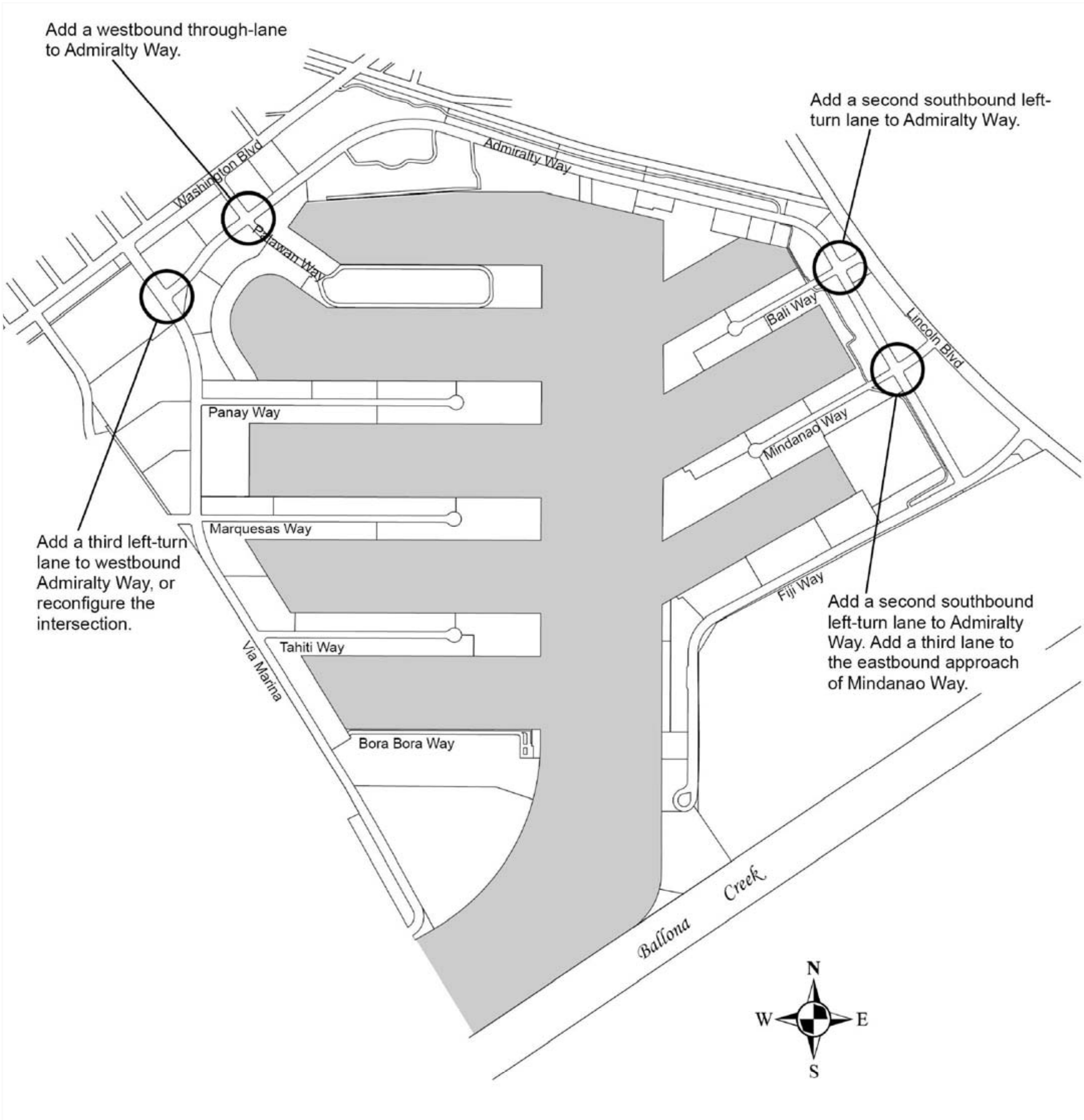
- In the Future Ambient (2020) with LCP Amendment (Pipeline Projects) conditions (without improvements), all 20 of the analyzed intersections in the morning peak hour and 18 of the 20 analyzed intersections in the evening peak hour are projected to operate at LOS D or better. The remaining intersections in the evening peak hour are projected to operate at LOS E. The Future Ambient (2020) with LCP Amendment conditions have been forecast to operate better than the Future Ambient (2010) conditions projected in the 1991–1994 DKS Study during both the morning and evening peak hours at all of the analyzed intersections.

- The LCP Amendment includes changes to the transportation improvement measures within the Marina del Rey area. Specific intersection improvement updates have been investigated, in addition to or in lieu of the Category 1 improvements in the approved LCP. Alternate additional improvement measures have also been developed at several intersections in order to provide improved operating conditions.

- The improvements, known as the Revised Set of Intersection Improvement Projects include (see Figure BB):

    1. <u>Via Marina/Admiralty Way Intersection Improvement Alternatives</u>

        a. <u>Alternative A</u> - The improvement at this intersection includes a third westbound left-turn lane and a second southbound left-turn lane. The westbound approach would provide three left-turn lanes and two right-turn lanes. The southbound approach would provide dual left-turn lanes and two through lanes.



SOURCE: LOS ANGELES COUNTY DEPARTMENT OF BEACHES AND HARBORS, PLANNING DIVISION

FIGURE BB
REVISED SET OF INTERSECTION IMPROVEMENT PROJECTS

RAJU Associates, Inc.

b. Alternative B - Realign this intersection to make Admiralty Way and Via Marina Way roadway segment south of Admiralty to become east-west roadways and make Via Marina Way north of Admiralty Way to "T" intersect into this roadway. The westbound Admiralty Way roadway would have two through lanes and a separate right-turn lane. The eastbound re-aligned Via Marina roadway would provide two through lanes and dual left-turn lanes. The re-aligned Via Marina Way southbound approach would provide dual left-turn lanes and a separate right-turn lane.

Replace the Admiralty Way 5-Lane Improvement Project recommended as part of the Local Coastal Program (LCP), with key intersection improvements (described below) that achieve similar improved operating results.

2. Palawan Way/Admiralty Way Intersection Improvement Alternatives

    a. Alternative A - The southbound approach at this intersection will be restriped to provide a left-turn lane, a shared left-through lane and a separate right-turn lane. The northbound approach would be restriped to provide a shared left-through lane and a shared through-right turn lane. A third through lane would be provided in the westbound direction. The westbound approach would provide a left-turn lane, two through lanes and a shared through-right lane. The north-south signal phasing would operate as a split phase due to the lane configurations.

    b. Alternative B - Provide an additional lane by restriping the southbound approach. The southbound approach would provide dual left-turn lanes, one through lane and a separate right-turn lane. The northbound approach would be restriped to provide a shared left-through lane and a separate right-turn lane. A third through lane would be provided in the westbound direction. The westbound approach would provide a left-turn lane, two through lanes and a shared through-right lane. The north-south signal phasing would operate as a split phase due to the lane configurations.

3. Admiralty Way/Bali Way - The improvement at this intersection includes a second southbound left-turn lane. The southbound approach would provide dual left-turn lanes, one through lane, and a shared through-right lane.

4. Admiralty Way/Mindanao Way - The improvement at this intersection includes a second southbound left-turn lane and an additional lane on the eastbound approach. The southbound approach would provide dual left-turn lanes, one through lane, and a shared through-right lane. The eastbound approach would provide a left-turn lane, a shared left-through lane and a shared through-right lane. The improvement also includes restriping the westbound approach to provide a left-turn lane, a shared left-through-right lane, and a separate right-turn lane. The east-west signal phase would operate as a split phase due to the lane configurations.

- In the Future Ambient (2020) with LCP Amendment conditions (with Revised Set of Intersection Improvement Projects), all 20 of the analyzed intersections in the morning peak hour and 19 of the 20 analyzed intersections in the evening peak hour are projected to operate at LOS D or better. The remaining intersection (Culver Boulevard at Jefferson Boulevard) is projected to continue to operate at LOS E in the evening peak hour. The Future Ambient (2020) with LCP Amendment and the Revised Set of Intersection Improvement Projects have been forecast to operate better than the Future Ambient conditions projected in the 1991–1994 DKS Study during both the morning and evening peak hours at all of the analyzed intersections.

- The proposed overall LCP Buildout including the Pipeline Projects Amendment would generate slightly less than the amount of trips generated by the LCP uses approved but not built yet, from the 1991–94 DKS Study, during the evening peak hour. The Proposed LCP Buildout trip generation would result in a total of approximately 2,503 trips (1,378 inbound, 1,125 outbound) during the evening peak hour. This is equivalent to approximately 91% of the approved PM peak hour trips in the LCP.

- In the Future Ambient (2020) with proposed LCP Buildout (including Pipeline Projects prior to any of the improvements) conditions, all 20 of the analyzed intersections in the morning peak hour and 10 of the 20 analyzed intersections in the evening peak hour are projected to operate at LOS D or better. The remaining intersections in the evening peak hour are projected to operate at LOS E or F. The Future Ambient (2020) with LCP Buildout conditions has been forecast to operate better than the Future Ambient (2010) plus approved LCP conditions projected in the 1991–1994 DKS Study during both the morning and evening peak hours at all of the analyzed intersections.

- In the Future Ambient (2020) with LCP Buildout conditions (with the Revised Set of Intersection Improvement Projects), all 20 of the analyzed intersections in the morning peak hour and 15 of the 20 analyzed intersections in the evening peak hour are projected to operate at LOS D or better. The Future Ambient (2020) with LCP Buildout and the Revised Set of Intersection Improvement Projects have been forecast to operate better than the Future Ambient plus approved LCP and mitigations conditions projected in the 1991–1994 DKS Study during both the morning and evening peak hours at all of the analyzed intersections.

- A cumulative analysis of future 2020 conditions with all related projects was performed and compared to the cumulative analysis conditions in the 1991–1994 DKS Study. In the Cumulative (2020) conditions, 18 and 17 of the 20 analyzed intersections are projected to operate at LOS D or better during the morning and evening peak hours, respectively. The remaining intersections are projected to operate at LOS E or F. The Cumulative (2020) conditions have been forecast to operate better than the Cumulative (2010) conditions (with no Marina development) projected in the 1991–1994 DKS Study during both the morning and evening peak hours at all of the analyzed intersections.

- In the Future (2020) Cumulative with LCP Amendment (Pipeline Projects) conditions, 18 and 13 of the 20 analyzed intersections would be operating at acceptable levels of service (LOS D or better) during the morning and evening peak hours, respectively. The Cumulative (2020) with LCP Amendment conditions have been forecast to operate better than the Cumulative (2010) conditions (with no Marina development) projected in the 1991–1994 DKS Study during both the morning and evening peak hours at all of the analyzed intersections.

- In the Future (2020) Cumulative with LCP Amendment (Pipeline Projects) conditions (with the Revised Set of Intersection Improvement Projects), 18 and 15 of the 20 analyzed intersections would be operating at acceptable levels of service (LOS D or better) during the morning and evening peak hours, respectively. The Cumulative (2020) with LCP Amendment and the Revised Set of Intersection Improvement Projects have been forecast to operate better than the Cumulative (2010) conditions (with no Marina development) projected in the 1991–1994 DKS Study during both the morning and evening peak hours at all of the analyzed intersections.

- In the Future (2020) Cumulative with Proposed LCP Buildout (including Pipeline Projects) conditions, 14 and 8 of the 20 analyzed intersections would be operating at acceptable levels of service (LOS D or better) during the morning and evening peak hours, respectively. Again, the Cumulative (2020) with LCP Buildout conditions have been forecast to operate better than the Cumulative (2010) conditions (with no Marina development) projected in the 1991–1994 DKS Study during both the morning and evening peak hours at all of the analyzed intersections.

- In the Future (2020) Cumulative with LCP Buildout conditions (with the Revised Set of Intersection Improvement Projects), 15 and 12 of the 20 analyzed intersections would be operating at acceptable levels of service (LOS D or better) during the morning and evening peak hours, respectively. Again, the Cumulative (2020) with LCP Buildout and the Revised Set of Intersection Improvement Projects have been forecast to operate better than the Cumulative (2010) conditions (with no Marina development) projected in the 1991–1994 DKS Study during both the morning and evening peak hours at all of the analyzed intersections.

- In summary, the proposed LCP Amendment (with Pipeline Projects) as well as the proposed LCP Buildout traffic conditions with the Revised Set of Intersection Improvement Projects would result in better operating conditions at all analysis locations than the future conditions with the approved LCP in the 1991–1994 DKS Study. Accordingly, the Revised Set of Intersection Improvement Projects would provide sufficient capacity for the five Pipeline Projects and for the proposed LCP buildout traffic conditions. Further, the Future Cumulative (2020) with both the proposed Amendment and proposed Buildout conditions are also projected to operate better than the Future Cumulative (2010) conditions (with no Marina development) projected in the 1991–1994 DKS Study.

- As part of this LCP Amendment, the number of development zones is proposed to be reduced to three major development zones within the Marina del Rey Local Coastal Plan area. This reduction of the number of development zones to three does not cause any substantial change in traffic operating conditions described for any of the scenarios summarized above.

I. INTRODUCTION

This report documents the assumptions, methodologies and findings of a study conducted by Raju Associates, Inc., to assess the proposed Marina del Rey Local Coastal Program (LCP) Amendment conditions including the five Pipeline Projects. This Plan Amendment is being prepared to evaluate and support the changes to the land use and their locations due to the five Pipeline Projects as well as the changes to the transportation improvement measures being currently contemplated within the Marina del Rey area in Los Angeles County, California.

The Proposed Project defined in this study as the Local Coastal Program Amendment (LCP Amendment) consists of the Pipeline Projects, changes to the transportation improvement measures and the specification of the three major development zones within Marina del Rey area.

LOCAL COASTAL PROGRAM AMENDMENT PROJECT DESCRIPTION

Five development projects have been proposed within Marina del Rey that would require amendments to the Marina del Rey Local Coastal Program. These projects, also referred to as 'the Pipeline Projects' are proposing land uses that include residential, commercial retail, active senior accommodations, hotel rooms, restaurants, visitor-serving commercial, office and dry-stack spaces within parcels 10/FF, OT/21, 33/NR, 52/GG and 49/77. The Pipeline Projects consist of new and intensified uses in these parcels that are being facilitated by relocating these and other uses equivalent to their approved trip-making potential from adjacent and other parcels in the Marina, per the currently approved LCP.

Numerous changes to the transportation improvements are also being proposed to support the land use changes noted above, that would also require LCP amendments. All these changes due to the Pipeline Projects and the transportation improvement updates have been aggregated into a single amendment. The aggregate approach was endorsed by both the Los Angeles County Board of Supervisors and the California Coastal Commission and its staff.

The Marina del Rey Land Use Plan is for a jurisdiction comprised of numerous lease parcels. For the purposes of the LCP Amendment, future development potential in the Marina del Rey LCP area has been divided into three Major Development Zones (MDZs). Within a MDZ, all the parcels have been aggregated for the purposes of analyzing traffic movements and their effects. This study provides a basis for analyzing traffic effects from proposed development in the Marina del Rey LCP study area. The zones are designed to isolate traffic effects on individual intersections in the Marina. The MDZs including the associated parcels and the amount of potential development allocated to each MDZ is summarized below. The potential development includes the redevelopment remaining from the approved development permitted in the LCP and the development that has been granted but not built. A detailed description of each of the Major Development Zones including the parcels involved and potential development is provided below.

Major Development Zone (MDZ) 1

Parcels: 1, 3, 112, 113, BR, 7, 8, 9, 111, 10, 12, 13, FF (proposed to become Parcel 14), 15, 18, 20, 95, 100, 101, 102, 103, 104, DS, LLS, AL-1, K-6

Potential Development available within this Zone -

- Residential Units: 1,497 dwelling units
- Hotel: 288 rooms
- Retail: 53,000 square feet of retail spaces
- Restaurant: 340 restaurant seats
- Congregate Care: 15 dwelling units

Major Development Zone (MDZ) 2

Parcels: 27, 28, 30, 33, 91, 97, 140, 141, 145, IR, H, JS, NR (proposed to be merged into Parcel 33), 125, 128, 129, OT (proposed to become Parcel 147), P, Q, RR, 21, 22, GR

Potential Development available within this Zone

- Residential Units: 292 dwelling units
- Hotel: 217 rooms
- Retail: 42,000 square feet of retail space
- Restaurant: 410 restaurant seats
- Congregate Care: 114 dwelling units
- Fire Station Expansion

Major Development Zone (MDZ) 3

Parcel: 40, 94, 130, 131, 132, 133, 134, SS, 41, 42, 43, 44, 45 (new parcel created from a portion of Parcel 44), 75, 76, 150, UR, 47, 48, 49, 50, 52, 53, 54, 77, EE, GG (proposed to be merged into Parcel 52), 55, 56, 61, BB, W, 62, 64, 65, XT, 51, 200

Potential Development available within this Zone

- Residential Units: 255 dwelling units
- Retail: 178,741 square feet of retail space
- Restaurant: 573 restaurant seats
- Office: 26,000 square feet of office space
- Dry Stack: 375 spaces
- Library: 3,000 square feet
- Ferry Terminal Site

Figure 1 illustrates the boundaries of the MDZs. A summary of the overall development potential is included below:

Proposed Local Coastal Program Buildout - Overall Total Potential Development

- Residential Units: 2,044 dwelling units
- Hotel: 505 rooms
- Visitor-Serving Commercial: 273,741 square feet of retail space
- Restaurant: 1,323 restaurant seats
- Congregate Care: 129 dwelling units
- Office: 26,000 square feet of office space
- Dry Stack: 375 spaces
- Library: 3,000 square feet
- Ferry Terminal Site
- Fire Station Expansion

The locations of the Proposed LCP Pipeline Projects are shown in Figure 2. The LCP Pipeline Projects include the following five projects:

Pipeline Projects

- Parcels 10/FF: 536 dwelling units replacing 136 dwelling units, a net total of 390 dwelling units
- Parcels 33/NR: 292 dwelling units, 32,400 square feet of retail space, 323 restaurant seats and 69 public parking spaces, replacing 191 public parking spaces

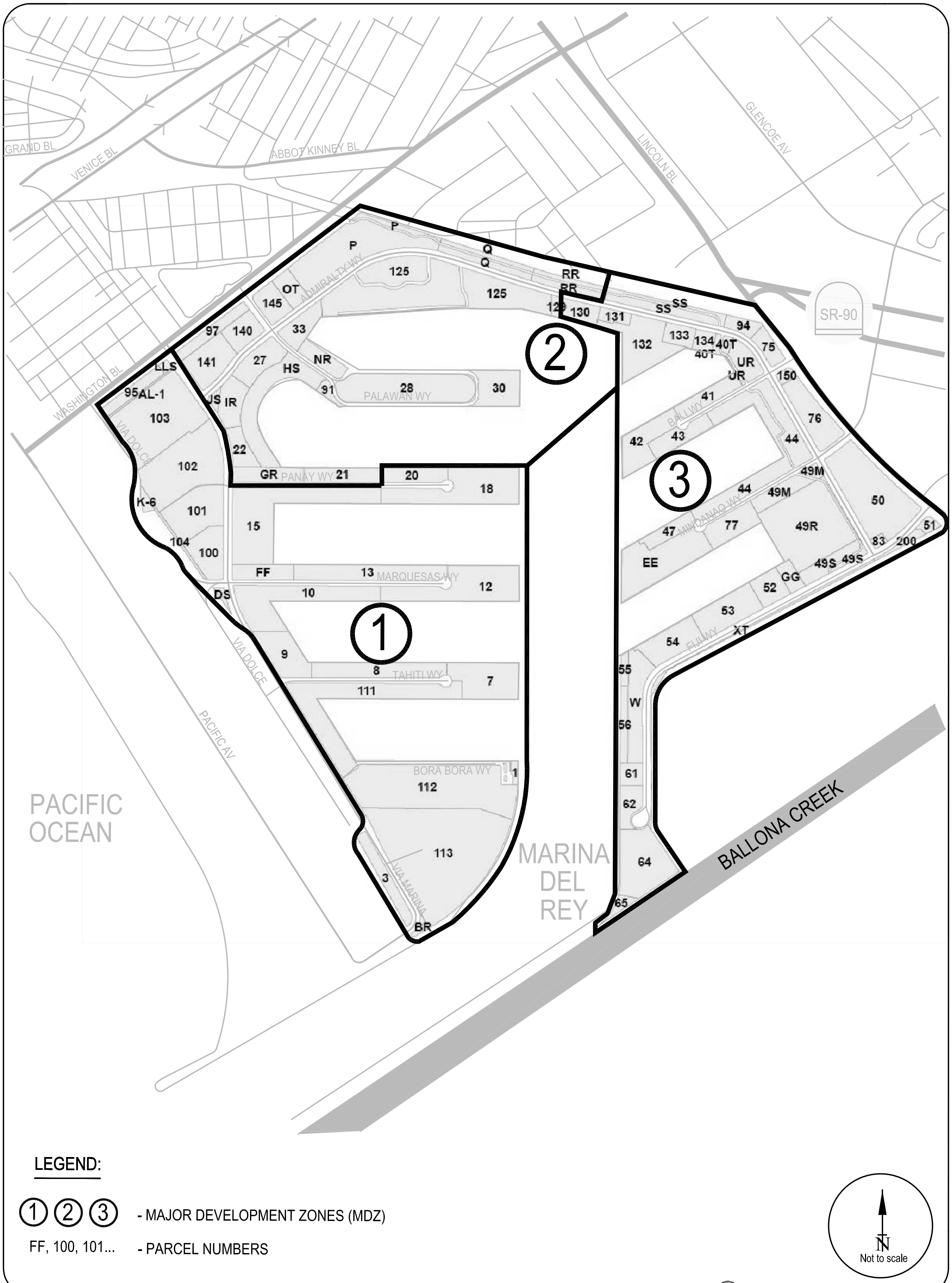


FIGURE 1
MAJOR DEVELOPMENT ZONES (MDZ) AND INCLUDED PARCELS IN MARINA DEL REY

RAJU Associates, Inc.

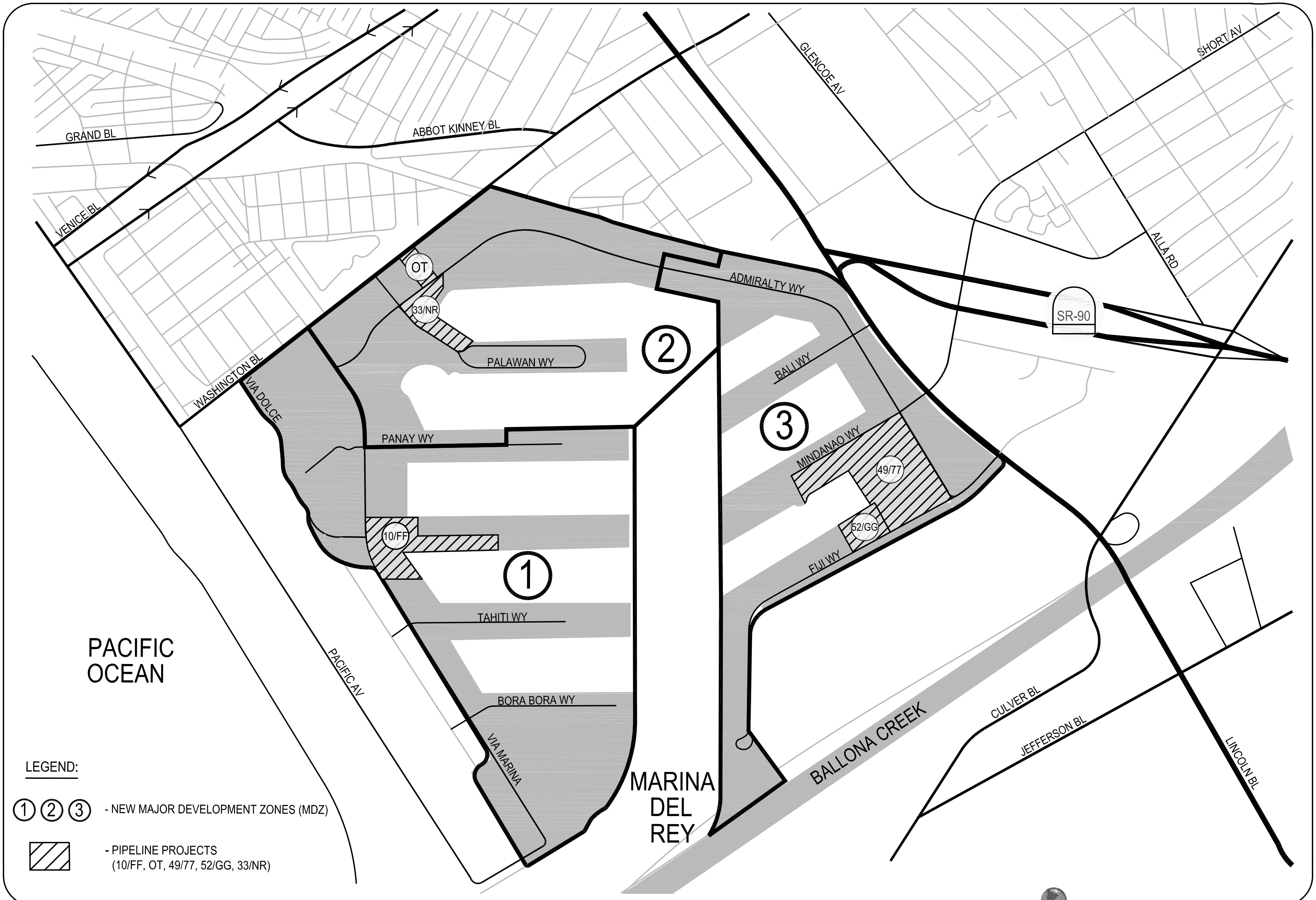


FIGURE 2
LOCATION OF PROPOSED LOCAL COASTAL PROGRAM (LCP) AMENDMENT PIPELINE PROJECTS

RAJU Associates, Inc.

- Parcels OT–21: Parcel OT includes 114-room senior active accommodations, 5,000 square feet of retail space and 92 public parking spaces. OT currently has 186 public parking spaces, 92 of which will remain in OT and 94 spaces will be built in Parcel 21; Parcel 21 includes a net increase of 6,000 square feet of office space, a net decrease of 6,000 square feet of health club and 94 public parking spaces (as a replacement for the 94 spaces from OT), Parcel 21 also includes 2,300 square feet of office space and 5,000 square feet of yacht club transferred from Parcel 20.
- Parcels 49–77: Option 1 -135,000 square feet of visitor-serving commercial space; Option 2 – 116,495 square feet of visitor-serving commercial space and 255 dwelling units; Option 3 – Up to 26,000 square feet of office use (Department of Beaches and Harbor Administration Building) with either Option 1 or Option 2.
- Parcels 52–GG: 375 dry stack spaces, 3,080 square feet of office use and 3,350 square feet of Sheriff’s boatwright shop (existing).

STUDY SCOPE

The scope of work for this study was developed in conjunction with the County of Los Angeles Department of Beaches and Harbors staff. The base assumptions, technical methodologies and geographic coverage of the study were all identified as part of the study approach. The study is directed at the analysis of potential traffic conditions on the street system produced by the Proposed LCP Amendment (Pipeline Projects) in comparison to future conditions with the approved LCP Project and includes an analysis of the following scenarios:

- Existing (2009) Conditions - The analysis of existing traffic conditions is intended to provide a basis for the remainder of the study. The existing conditions analysis includes an assessment of streets, traffic volumes, and operating conditions. A comparison to the year 1991 traffic counts and operations at the same analysis locations is also provided in this section.

- Future Ambient (2020) Conditions - Future traffic conditions without the Project have been developed for the year 2020. The objective of this analysis is to project future traffic growth and operating conditions, which could be expected to result from regional growth in the vicinity of the study area by the year 2020. These operating conditions are then compared to the Future Ambient (2010) conditions from the 1991–1994 DKS Study to provide a comparative assessment of future ambient conditions in 2020 in relation to that projected for 2010 in the 1991–1994 DKS Study.

- Cumulative (2020) Conditions – The net traffic expected to be generated by the related projects is estimated and added to the Future Ambient (2020) traffic forecasts. Operating conditions at all locations are determined. The operating conditions are compared to the Cumulative (2010) Conditions (with no Marina Development) from the 1991/1994 DKS Study to determine if cumulative conditions would be similar to or better than those projected in the approved LCP traffic studies.

- <u>Future Ambient (2020) with LCP Amendment Pipeline Project Conditions</u> - The net traffic expected to be generated by the LCP Amendment including the five Pipeline Projects is estimated and added to the Future Ambient (2020) traffic forecasts and operating conditions are determined. These operating conditions with and without improvements are compared to the Future Ambient (2010) Conditions from the 1991/1994 DKS Study to assess the projected conditions under the proposed LCP Amendment in comparison to the Future Ambient Conditions previously approved by the Los Angeles County Board of Supervisors and the California Coastal Commission.

- <u>Future Ambient (2020) with Proposed LCP Buildout Conditions</u> - The net traffic expected to be generated by only the Proposed LCP Buildout Conditions (including the Pipeline Projects) is estimated and added to the Future Ambient (2020) traffic forecasts. Operating conditions with and without improvements at all analysis locations are determined. These operating conditions are compared to the Future (2010) Conditions with the LCP Approved Project with and without mitigations from the 1991/1994 DKS Study to determine if they would function similar to or better than those projected in the approved LCP traffic studies.

- <u>Cumulative (2020) with LCP Amendment Pipeline Project Conditions</u> - The net traffic expected to be generated by the LCP Amendment including the five Pipeline Projects is estimated and added to the Cumulative (2020) traffic forecasts and operating conditions are determined. These operating conditions with and without improvements are compared to the Cumulative (2010) Conditions (with no Marina Development) from the 1991/1994 DKS Study to assess the projected cumulative conditions under the proposed LCP Amendment in comparison to the Cumulative Conditions previously approved by the Los Angeles County Board of Supervisors and the California Coastal Commission.

- <u>Cumulative (2020) with Proposed LCP Buildout Conditions</u> - The net traffic expected to be generated by only the Proposed LCP Buildout Conditions (including the Pipeline Projects) is estimated and added to the Cumulative (2020) traffic forecasts. Operating conditions with and without improvements at all analysis locations are determined. These operating conditions are compared to the Cumulative (2010) Conditions (with no Marina Development) from the 1991/1994 DKS Study to determine if they would function similar to or better than those projected in the approved LCP traffic studies.

The same 19 intersections within Marina del Rey and City of Los Angeles that were analyzed in the original Marina del Rey Local Coastal Plan Traffic Study, January 1991, and Marina del Rey Local Coastal Plan Traffic Study Addendum, May 1994, prepared by DKS Associates, plus an additional intersection (Washington Boulevard/Palawan Way) were chosen for analysis. All of the 19 previously studied intersections are controlled by traffic signals, with the exception of the intersections of Via Marina/Bora Bora Way which is stop-controlled on the minor approaches (Bora Bora Way). Washington Boulevard/Palawan Way is also stop-controlled along Palawan Way.

The following intersections, illustrated in Figure 3, along with the jurisdiction they belong to, were analyzed for the scenarios described earlier:

1. Via Marina-Ocean Avenue / Washington Boulevard (Los Angeles County, City of Los Angeles)
2. Via Marina / Admiralty Way (Los Angeles County)
3. Via Marina / Panay Way (Los Angeles County)
4. Via Marina / Marquesas Way (Los Angeles County)
5. Via Marina / Tahiti Way (Los Angeles County)
6. Via Marina / Bora Bora Way (unsignalized) (Los Angeles County)
7. Palawan Way / Admiralty Way (Los Angeles County)
8. Lincoln Boulevard / Washington Boulevard (City of Los Angeles/Caltrans)
9. Lincoln Boulevard / Marina (SR-90) Expressway (City of Los Angeles/Caltrans)
10. Admiralty Way / Bali Way (Los Angeles County)
11. Lincoln Boulevard / Bali Way (Los Angeles County, City of Los Angeles, Caltrans)
12. Admiralty Way / Mindanao Way (Los Angeles County)
13. Lincoln Boulevard / Mindanao Way (Los Angeles County, City of Los Angeles/Caltrans)
14. Admiralty Way / Fiji Way (Los Angeles County)
15. Lincoln Boulevard / Fiji Way (Los Angeles County, City of Los Angeles/Caltrans)
16. Mindanao Way / Marina (SR-90) Expressway Eastbound (City of Los Angeles/Caltrans)
17. Mindanao Way / Marina (SR-90) Expressway Westbound (City of Los Angeles/Caltrans)
18. Culver Boulevard / Jefferson Boulevard (City of Los Angeles)
19. Lincoln Boulevard / Jefferson Boulevard (City of Los Angeles/Caltrans)
20. Washington Boulevard / Palawan Way (unsignalized) (City of Los Angeles, Los Angeles County)

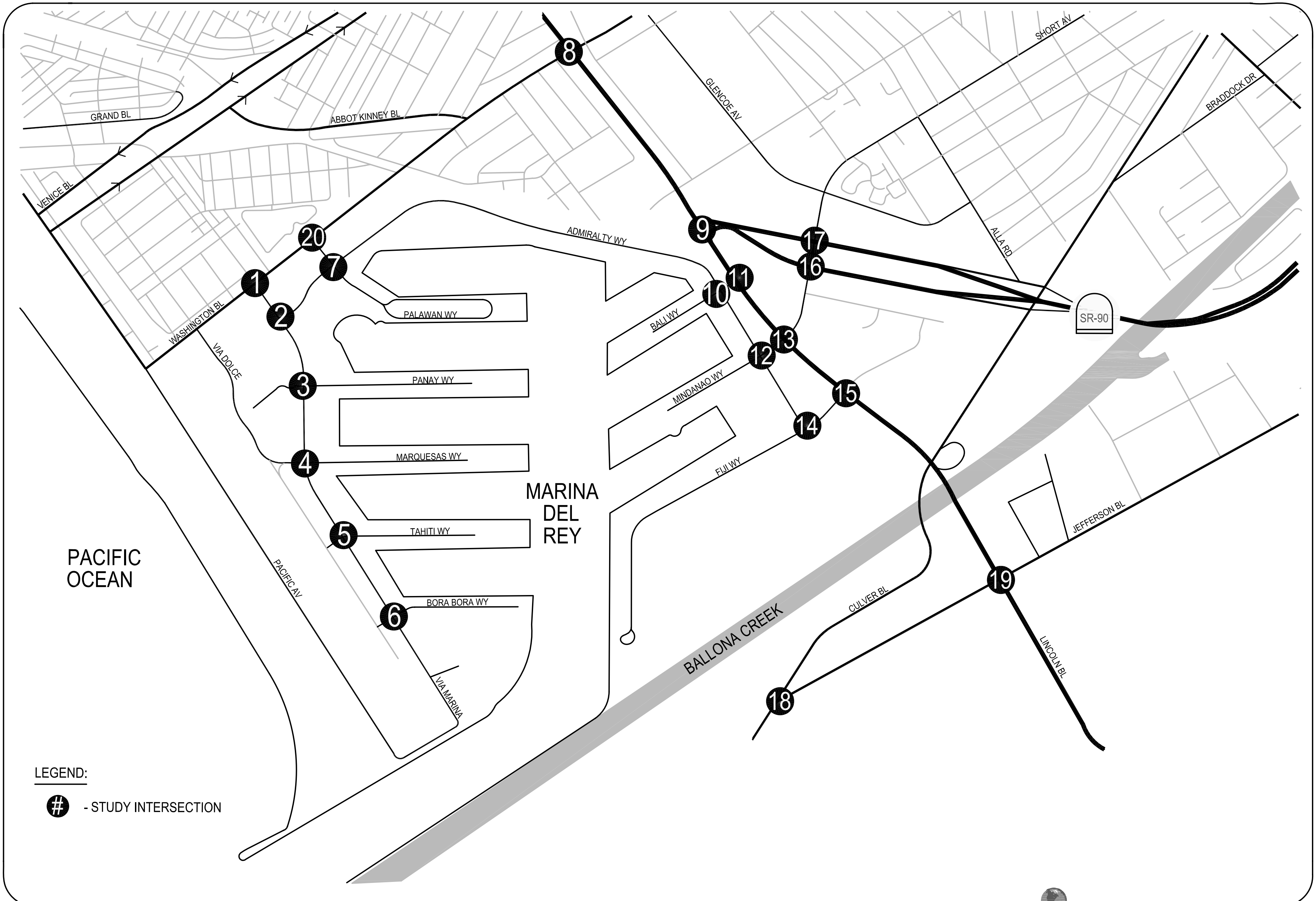


FIGURE 3
LOCATION OF STUDY INTERSECTIONS

RAJU Associates, Inc.

ORGANIZATION OF REPORT

An executive summary presenting key details of the study is provided at the beginning of this report. The rest of the report is divided into seven chapters. Chapter I is this introduction and provides details of the various elements of the study. Chapter II describes the existing circulation system, traffic volumes, and traffic conditions within the study area. A comparison to traffic conditions presented in the approved LCP traffic studies is also presented in the chapter. The methodology to obtain Future Year 2020 traffic volumes without the Proposed Project are described and applied in Chapter III. Relevant comparisons to corresponding scenarios in the 1991/1994 DKS Study is also provided. Chapter IV presents assessment of traffic conditions with the Proposed Amendment Project (Pipeline Projects only) as well as the Proposed LCP Buildout conditions. The potential differences in traffic conditions due to the Proposed Amendment Project (Pipeline Projects) as well as the proposed LCP Buildout relative to future ambient conditions with and without approved LCP Project in the approved LCP traffic studies (1991/94 DKS Study) are also presented in Chapter IV. Cumulative conditions without and with the Proposed Project (Pipeline Projects) as well as Proposed LCP Buildout (including Pipeline Projects) are assessed and compared to the Cumulative Conditions (without any Marina Development) presented in the approved 1991/94 DKS Study in Chapter V. A description and assessment of the transportation improvement measures being advanced as part of the Proposed LCP Amendment Project is presented in Chapter VI. A summary of the analysis and conclusions is included in Chapter VII. Appendices to this report include details of the technical analysis and are presented in Volume II of this Study Report under a separate cover.

II. EXISTING CONDITIONS

A comprehensive data collection effort was undertaken to develop a detailed description of existing conditions within the study area. The assessment of conditions relevant to this study includes an inventory of the street system, traffic volumes on these facilities, and operating conditions at key intersections. A detailed description of these elements is presented in this chapter.

STUDY AREA

Marina del Rey is in the unincorporated area of Los Angeles County and is located in the western section of the Los Angeles Metropolitan Basin between the coastal communities of Venice and Playa del Rey. The Marina del Rey area covers approximately 943 land and water acres and is operated by the County of Los Angeles Department of Beaches and Harbors. The study area for this project is bounded by Washington Boulevard on the north, Jefferson Boulevard on the south, Lincoln Boulevard on the east and the Pacific Ocean on the west. The Marina (SR-90) Freeway provides access to Marina del Rey via Lincoln Boulevard. The San Diego (I-405) Freeway is located approximately 2.25 miles east of Marina del Rey, the Santa Monica (I-10) Freeway is located approximately 3 miles north of Marina del Rey, and the Glenn M Anderson (I-105) Freeway is located approximately 4 to 5 miles south of Marina del Rey.

EXISTING STREET SYSTEM

The existing street system within the study area consists of a regional highway system including major and secondary arterials and a local street system including collectors and local streets. A description of the regional and local access and circulation offered by the various roadways follows.

The Marina Expressway/Freeway (SR-90), San Diego (I-405) Freeway, Santa Monica (I-10) Freeway and Glenn M Anderson (I-105) Freeway provide the primary regional access to the study area. The major and other arterial streets used to access the study area include Admiralty Way, Via Marina Way, Mindanao Way, Lincoln Boulevard, Washington Boulevard, Jefferson Boulevard, and Culver Boulevard. Bali Way, Fiji Way, Palawan Way, Panay Way, Marquesas Way, Tahiti Way, and Bora Bora Way provide direct access and local circulation. Brief descriptions of these facilities serving the study area follows.

- Admiralty Way □ Admiralty Way is a secondary highway that traverses generally in a north-south direction from Via Marina to Fiji Way. The posted speed limit is 40 miles per hour. This roadway generally offers four travel lanes, two lanes in each direction, with a raised median and left-turn lanes at key intersections. On-street parking is not allowed on either side of the street along this roadway.

- Via Marina □ Via Marina is a north-south secondary highway that serves the western portion of Marina del Rey and extends from Washington Boulevard south to the water entrance within the Marina. North of Washington Boulevard, this road is called Ocean Avenue. It generally provides two to three travel lanes in each direction, with left-turn lanes at key intersections. Parking is not allowed on either side of this street within the Marina. The posted speed limit along this facility is 40 miles per hour.

- Palawan Way □ Palawan Way is a local roadway that provides connectivity from Washington Boulevard to Admiralty Way and points south and traverses in a north-south direction. It provides two travel lanes in each direction between Washington Boulevard and Admiralty Way. Palawan Way also provides access to the Marina del Rey Basin D and Basin E areas. The posted speed limit is 30 miles per hour. On-street parking is generally not allowed on either side of the street within the stretch between Washington Boulevard and Admiralty Way. Palawan Way south of Admiralty Way is a mole road maintained by Los Angeles County Department of Beaches and Harbors (DBH).

- Bali Way □ Bali Way is a short local roadway that traverses in an east-west direction. The posted speed limit is 30 miles per hour. Bali Way provides connectivity from Lincoln Boulevard to Admiralty Way and points west and provides access to the Marina del Rey Basin F and Basin G areas. This roadway offers two lanes in each direction between Lincoln Boulevard and Admiralty Way. On-street parking is not allowed on either side of the street within that stretch. Bali Way west of Admiralty Way is a mole road maintained by DBH.

- Mindanao Way □ Mindanao Way is a secondary arterial roadway that traverses in an east-west direction. Mindanao Way provides access to Burton Chase Park, the Marina del Rey Basin G berths, the Marina Freeway and points east. The posted speed limit is 30 miles per hour. The roadway generally offers four travel lanes, two lanes in each direction, with a raised central median between Admiralty Way and Marina Freeway. Within the study area, on-street parking is generally not allowed on either side of the street. Mindanao Way, west of Admiralty Way, is a mole road maintained by DBH.

- Fiji Way □ Fiji Way is a local roadway and traverses in an east-west direction. This roadway provides four travel lanes, two lanes in each direction, with a raised central median between Lincoln Boulevard and Admiralty Way. Within the study area, on-street parking is not allowed on either side of the street. The posted speed limit along this facility is 35 miles per hour.

- Panay Way – Panay Way is a local roadway that traverses in an east-west direction and provides access to Marina del Rey Basin C and Basin D areas. It provides two travel lanes, one lane in each direction, with a raised central median. Parking is not allowed on either side of the street. The posted speed limit is 30 miles per hour. Panay Way is a mole road maintained by the DBH.

- Marquesas Way – Marquesas Way is a local roadway that traverses in an east-west direction and provides access to the Marina del Rey Basin B and Basin C areas. It provides two travel lanes, one lane in each direction, with raised central median. No parking is allowed on either side of the street. The posted speed limit is 30 miles per hour. Marquesas Way, east of Admiralty Way is a mole road maintained by the DBH.

- Tahiti Way – Tahiti Way is a local roadway that traverses in an east-west direction and provides access to the Marina del Rey Basin A and Basin B areas. It provides two travel lanes, one lane in each direction, with a raised central median. Parking is allowed on both sides of the street. The speed limit is 25 miles per hour. Tahiti Way east of Admiralty Way is a mole road maintained by the DBH.

- Bora Bora Way – Bora Bora Way is an undivided private street that traverses in an east-west direction and provides access to the Marina del Rey Basin A area. It provides two travel lanes, one lane in each direction. Parking is allowed on the south side of the street. The speed limit is 25 miles per hour.

- Lincoln Boulevard – Lincoln Boulevard is a major arterial roadway that runs in a north-south direction across several jurisdictions. The posted speed limit is 40 miles per hour in the vicinity of the study area. Within the study area, the roadway generally offers six travel lanes, three lanes in each direction with left-turn lanes at all intersections. Generally, no parking is allowed along many stretches of this roadway within the study area except between Maxella Avenue and north of Washington Boulevard.

- Washington Boulevard – Washington Boulevard is a major arterial roadway that traverses in an east-west direction. This roadway offers four travel lanes, two lanes per direction, with a central left-turn median. Restricted parking is allowed along many stretches of this roadway, generally, except at major intersections where turn lanes are provided. The posted speed limit is 35 miles per hour.

- Jefferson Boulevard – Jefferson Boulevard is a major arterial roadway that traverses in an east-west direction across several jurisdictions and provides six to seven travel lanes, three lanes in the westbound direction and three to four lanes in the eastbound direction. Within the study area, this roadway provides connection between Culver Boulevard and the I-405 northbound and southbound on-off ramps and points east. Restricted parking is available for a short stretch on either side of the street between Inglewood Boulevard and Mesmer Avenue. The posted speed limit along this facility is 45 miles per hour.

- Culver Boulevard – Culver Boulevard is a major arterial roadway that traverses in a northeast-southwest direction. This roadway offers four travel lanes, two lanes per direction between Lincoln Boulevard and Marina Freeway. Restricted parking is allowed along many stretches of this roadway, generally, except at major intersections where turn lanes are provided. Within the study area, the posted speed limit is 40 miles per hour.

The existing lane configurations of the analyzed intersections are included in Appendix A.

EXISTING TRAFFIC VOLUMES AND LEVELS OF SERVICE

The following sections present the existing intersection peak hour traffic volumes, a description of the methodology utilized to analyze the intersection operating conditions, and the resulting level of service conditions at each of the study locations.

Existing Traffic Volumes and Comparison to Base (Existing) Traffic Counts in 1991/1994 DKS Study

Weekday morning and evening peak hour traffic counts were compiled from data collected at the 20 analyzed intersections in May 2009 and in January 2010. These traffic volumes reflect typical weekday operations during current conditions. The raw data showing the counts are attached in Appendix B. The existing traffic volumes during AM and PM peak hours are attached in Appendix C.

Table 1 provides a comparison of existing 2009 traffic counts to the base traffic counts presented in the 1991□1994 DKS Study. It can be observed from this table that the current traffic in the vicinity of the Marina has decreased in recent years. The 2009 counts have decreased by an amount equivalent to 5□ in the morning peak hour and 8□ in the evening peak hour compared to 1991□1994 counts on an overall basis.

Level of Service Methodology

Level of Service (LOS) is a qualitative measure used to describe the condition of traffic flow, ranging from excellent conditions at LOS A to overloaded conditions at LOS F. LOS D is typically recognized as the minimum acceptable level of service in urban areas. The Level of Service definitions for signalized intersections is provided in Table 2.

All of the analyzed intersections are controlled by traffic signals, with the exception of the intersections of Via Marina□Bora Bora Way and Washington Boulevard□Palawan Way. At these locations, stop signs on the minor approaches along Bora Bora Way and Palawan Way, respectively, currently provide the required traffic control.

TABLE 1
COMPARISON OF EXISTING PEAK HOUR TRAFFIC VOLUMES

		AM Peak Hour			
		1991/1994 Study [1]	2009 Study	Traffic Growth 1994 to 2009	
		Base (Existing)	Existing		
Intersection		Volumes	Counts	Vol. Diff.	Growth
1 Via Marina	Washington Bl	2,835	2,570	-265	-9%
2 Via Marina	Admiralty Way	2,542	2,781	239	9%
3 Via Marina	Panay Way	2,036	1,702	-334	-16%
4 Via Marina	Marquesas Way	1,739	1,342	-397	-23%
5 Via Marina	Tahiti Way	1,162	1,026	-136	-12%
6 Via Marina	Bora Bora Way	850	737	-113	-13%
7 Palawan Way	Admiralty Way	2,640	2,215	-425	-16%
8 Lincoln Bl	Washington Bl	6,100	5,740	-360	-6%
9 Lincoln Bl	Marina Expressway	4,675	4,771	96	2%
10 Admiralty Way	Bali Way	2,639	2,315	-324	-12%
11 Lincoln Bl	Bali Way	3,630	3,365	-265	-7%
12 Admiralty Way	Mindanao Way	2,538	2,239	-299	-12%
13 Lincoln Bl	Mindanao Way	4,659	4,399	-260	-6%
14 Admiralty Way	Fiji Way	1,248	1,407	159	13%
15 Lincoln Bl	Fiji Way	4,555	4,239	-316	-7%
16 Mindanao Way	Marina Expressway EB	3,150	3,070	-80	-3%
17 Mindanao Way	Marina Expressway WB	2,515	2,809	294	12%
18 Culver Bl	Jefferson Bl	3,868	3,656	-212	-5%
19 Lincoln Bl	Jefferson Bl	5,441	5,232	-209	-4%
20 Palawan Way	Washington Bl	n/a	1,917	-	-
	Total [2]	58,822	55,615	-3,207	-5%

		PM Peak Hour			
		1991/1994 Study [1]	2009 Study	Traffic Growth 1994 to 2009	
		Base (Existing)	Existing		
Intersection		Volumes	Counts	Vol. Diff.	Growth
1 Via Marina	Washington Bl	3,358	3,148	-210	-6%
2 Via Marina	Admiralty Way	3,289	3,293	4	0%
3 Via Marina	Panay Way	2,385	1,826	-559	-23%
4 Via Marina	Marquesas Way	1,885	1,393	-492	-26%
5 Via Marina	Tahiti Way	1,527	1,022	-505	-33%
6 Via Marina	Bora Bora Way	1,103	813	-290	-26%
7 Palawan Way	Admiralty Way	4,116	3,307	-809	-20%
8 Lincoln Bl	Washington Bl	5,358	6,407	1,049	20%
9 Lincoln Bl	Marina Expressway	5,358	5,089	-269	-5%
10 Admiralty Way	Bali Way	3,876	2,953	-923	-24%
11 Lincoln Bl	Bali Way	4,635	3,730	-905	-20%
12 Admiralty Way	Mindanao Way	3,316	3,266	-50	-2%
13 Lincoln Bl	Mindanao Way	5,400	5,101	-299	-6%
14 Admiralty Way	Fiji Way	2,124	1,789	-335	-16%
15 Lincoln Bl	Fiji Way	5,988	5,471	-517	-9%
16 Mindanao Way	Marina Expressway EB	3,549	3,637	88	2%
17 Mindanao Way	Marina Expressway WB	3,440	3,555	115	3%
18 Culver Bl	Jefferson Bl	4,184	3,641	-543	-13%
19 Lincoln Bl	Jefferson Bl	6,828	6,187	-641	-9%
20 Palawan Way	Washington Bl	n/a	2,070	-	-
	Total [2]	71,719	65,628	-6,091	-8%

[1] Source: *Marina del Rey Traffic Study,* DKS Associates, January 1991
and *Marina del Rey Traffic Study Addendum-Final Report,* DKS Associates, May 1994
[2] For purposes of comparison, volume totals do not include intersection #20 - Palawan Way/Washington Bl.

TABLE 2
LEVEL OF SERVICE DEFINITIONS FOR SIGNALIZED INTERSECTIONS

Level of Service	Volume/Capacity Ratio	Definition
A	0.000 - 0.600	EXCELLENT. No Vehicle waits longer than one red light and no approach phase is fully used.
B	□0.600 - 0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	□0.700 - 0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	□0.800 - 0.900	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	□0.900 - 1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	□ 1.000	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths

Source: Transportation Research Board, *Transportation Research Circular No. 212, Interim Materials on Highway Capacity* , 1980.

The "Critical Movement Analysis (CMA) - Planning" (Transportation Research Board, 1980) method of intersection capacity analysis was used to determine the intersection volume to capacity (V/C) ratio and corresponding level of service at the signalized intersections. The CALCADB software package developed by the City of Los Angeles Department of Transportation (LADOT) was used to implement the CMA methodology. This software calculates the critical volumes, volume to capacity ratios and levels of service for each intersection using specified geometry, signal phasing and availability of ATSAC at each of the analysis locations, and allows for interactive modifications to basic inputs for identification of improvement measures and other sensitivity tests.

All of the signalized study intersections are currently controlled by the City of Los Angeles' Automated Traffic Surveillance and Control (ATSAC) System and Adaptive Traffic Control System (ATCS). A capacity increase of 10% (0.07 V/C adjustments for ATSAC and 0.03 V/C adjustments for ATCS) was applied to reflect the benefits of ATSAC/ATCS control at these intersections.

Existing (Year 2009) Levels of Service and Comparison to Base Existing Conditions from 1991-1994 DKS Study

The existing traffic volumes presented in Appendix C for AM and PM peak hours, were used in conjunction with the level of service methodologies described above, and the current intersection characteristics illustrated in Appendix A, to determine the existing operating conditions at the analyzed intersections.

Table 3 summarizes the results of the intersection capacity analysis for existing conditions at each of the 20 intersections in the study area. The table indicates the existing V/C ratio during the morning and evening peak hours and the corresponding LOS at the study intersections. The results for AM and PM peak hours are also shown in Figures 4 and 5, respectively. From Table 3, it can be observed that all of the study intersections are currently operating at LOS D or better during both the morning and evening peak hours.

Table 4 provides a comparison of 2009 existing conditions and the base/existing conditions from the 1991/1994 DKS Study. It can be observed from the table, in the 1991/1994 DKS Study, 16 of the 19 study intersections operated at LOS D or better during the morning peak hour and 10 of the 19 study intersections operated at LOS D or better during the evening peak hour. The remaining intersections were determined to be operating at LOS E or F in the 1991/1994 Study. In the existing year 2009 conditions, all locations were projected to be operating at LOS D or better.

TABLE 3
SUMMARY OF LEVEL OF SERVICE ANALYSIS - EXISTING CONDITIONS

□	INTERSECTION	AM PEAK HOUR		PM PEAK HOUR	
		V/C	LOS	V/C	LOS
1	Via Marina □ Washington Boulevard	0.53	A	0.72	C
2	Via Marina □ Admiralty Way	0.44	A	0.77	C
3	Via Marina □ Panay Way	0.37	A	0.29	A
4	Via Marina □ Marquesas Way	0.25	A	0.20	A
5	Via Marina □ Tahiti Way	0.25	A	0.16	A
6	Via Marina □ Bora Bora Way [1]	0.33	A	0.31	A
7	Palawan Way □ Admiralty Way	0.40	A	0.67	B
8	Lincoln Boulevard □ Washington Boulevard	0.72	C	0.79	C
9	Lincoln Boulevard □ Marina Expressway	0.70	B	0.66	B
10	Admiralty Way □ Bali Way	0.34	A	0.49	A
11	Lincoln Boulevard □ Bali Way	0.40	A	0.52	A
12	Admiralty Way □ Mindanao Way	0.47	A	0.66	B
13	Lincoln Boulevard □ Mindanao Way	0.64	B	0.76	C
14	Admiralty Way □ Fiji Way	0.20	A	0.36	A
15	Lincoln Boulevard □ Fiji Way	0.50	A	0.73	C
16	Mindanao Way □ Marina Expressway EB	0.61	B	0.77	C
17	Mindanao Way □ Marina Expressway WB	0.39	A	0.53	A
18	Culver Boulevard □ Jefferson Boulevard	0.84	D	0.90	D
19	Lincoln Boulevard □ Jefferson Boulevard	0.54	A	0.73	C
20	Palawan Way □ Washington Boulevard [1]	0.68	B	0.73	C

[1] Unsignalized intersection - stop-controlled on minor approach(es).

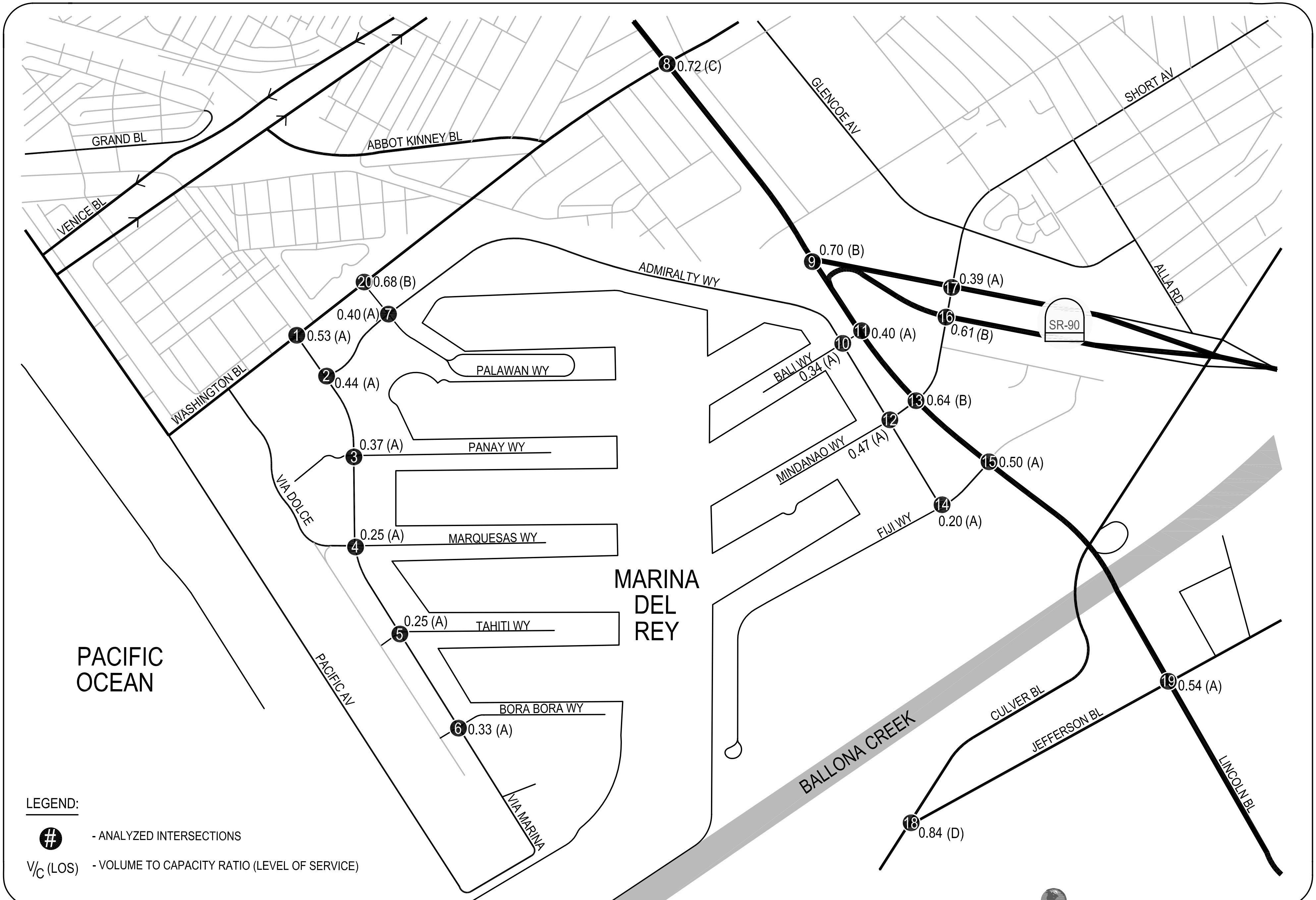


FIGURE 4
EXISTING (2009) LEVELS OF SERVICE - AM PEAK HOUR

RAJU Associates, Inc.

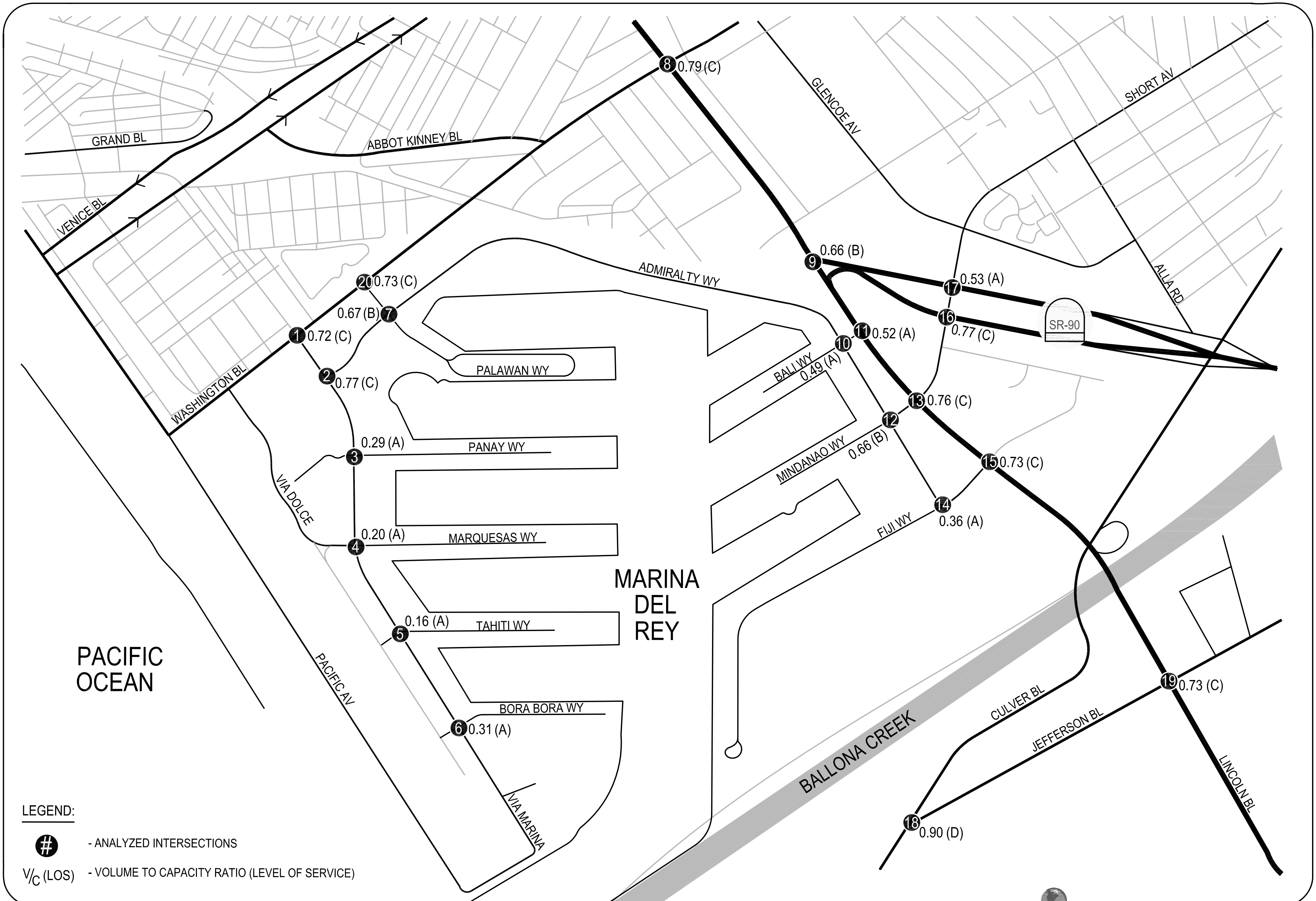


FIGURE 5
EXISTING (2009) LEVELS OF SERVICE - PM PEAK HOUR

RAJU Associates, Inc.

TABLE 4
COMPARISON OF EXISTING LEVELS OF SERVICE

Intersection		Peak Period	1991-1994 DKS Study [2] Existing Conditions V/C	1991-1994 DKS Study [2] Existing Conditions LOS	2009 Study Existing Conditions V/C	2009 Study Existing Conditions LOS
1 Via Marina	Washington Bl	AM	0.70	B	0.53	A
		PM	0.96	**E**	0.72	C
2 Via Marina	Admiralty Way	AM	0.51	A	0.44	A
		PM	0.83	D	0.77	C
3 Via Marina	Panay Way	AM	0.58	A	0.37	A
		PM	0.53	A	0.29	A
4 Via Marina	Marquesas Way	AM	0.33	A	0.25	A
		PM	0.39	A	0.20	A
5 Via Marina	Tahiti Way	AM	0.41	A	0.25	A
		PM	0.40	A	0.16	A
6 Via Marina	Bora Bora Way [1]	AM	0.35	A	0.33	A
		PM	0.33	A	0.31	A
7 Palawan Way	Admiralty Way	AM	0.68	B	0.40	A
		PM	1.06	**F**	0.67	B
8 Lincoln Bl	Washington Bl	AM	1.00	**E**	0.72	C
		PM	1.19	**F**	0.79	C
9 Lincoln Bl	Marina Expressway	AM	0.84	D	0.70	B
		PM	0.95	**E**	0.66	B
10 Admiralty Way	Bali Way	AM	0.58	A	0.40	A
		PM	0.99	**E**	0.55	A
11 Lincoln Bl	Bali Way	AM	0.57	A	0.40	A
		PM	0.82	D	0.52	A
12 Admiralty Way	Mindanao Way	AM	0.80	C	0.47	A
		PM	0.99	**E**	0.66	B
13 Lincoln Bl	Mindanao Way	AM	0.88	D	0.64	B
		PM	0.90	D	0.76	C
14 Admiralty Way	Fiji Way	AM	0.31	A	0.20	A
		PM	0.51	A	0.36	A
15 Lincoln Bl	Fiji Way	AM	0.58	A	0.50	A
		PM	0.83	D	0.73	C
16 Mindanao Way	Marina Expressway EB	AM	0.86	D	0.61	B
		PM	0.93	**E**	0.77	C
17 Mindanao Way	Marina Expressway WB	AM	0.59	A	0.39	A
		PM	0.81	D	0.53	A
18 Culver Bl	Jefferson Bl	AM	0.92	**E**	0.84	D
		PM	1.00	**E**	0.90	D
19 Lincoln Bl	Jefferson Bl	AM	1.01	**F**	0.54	A
		PM	0.99	**E**	0.73	C
20 Palawan Way	Washington Bl [1]	AM	n/a	-	0.68	B
		PM	n/a	-	0.73	C

[1] Unsignalized intersections - stop-controlled on minor approach(es).
[2] Source: *Marina del Rey Traffic Study,* DKS Associates, January 1991
and *Marina del Rey Traffic Study Addendum-Final Report,* DKS Associates, May 1994

The table further indicates that all of the analyzed intersections under Existing (2009) conditions are operating at better V/C ratios and levels of service than those presented for Base Existing conditions in the1991/1994 DKS Study. These improved operations are due to decreased levels of traffic at these intersections as well as street improvements that have been completed since the 1991/1994 DKS Study was completed. Further, the inclusion of ATSAC and ATCS credit which allows a capacity increase of 0.10 also has contributed to projections of improved levels of service, currently, at the analysis intersections.

Capacity calculation worksheets for Existing (2009) conditions are provided in Appendix C of the report.

EXISTING TRANSIT CONDITIONS

Nine bus lines currently serve the study area. Three bus lines are operated by the Los Angeles County Metropolitan Transportation Authority (LACMTA), three bus lines are operated by the Culver City Bus (CC), two bus lines are operated by Santa Monica Big Blue Bus (SM) and one bus line is operated by the Los Angeles Department of Transportation (CE). These transit lines are described below:

- <u>LACMTA 108</u> - Line 108 is a local east/west line that provides service from Marina del Rey to Pico Rivera and travels primarily along Via Marina, Admiralty Way and Mindanao Way within the study area. This line runs every day, including holidays, at a peak frequency of approximately 20-30 minutes during peak commute hours. The western terminus is at the intersection of Palawan Way/Washington Boulevard in Marina del Rey. The eastern terminus is at the intersection of Paramount Boulevard/Slauson Avenue in Pico Rivera.

- <u>LACMTA 110</u> - Line 110 is a local east/west line that provides service from Playa Vista to Bell Gardens and travels primarily along Jefferson Boulevard within the study area. This line runs every day, including holidays, at a peak frequency of approximately 8-10 minutes during peak commute hours. The western terminus is at intersection of Playa Vista Drive/Jefferson Boulevard in Playa Vista. The eastern terminus is at the intersection of Granger Avenue/Florence Avenue in Bell Gardens.

- <u>LACMTA 358</u> - Line 358 is a local, limited stop, east/west line that provides service from Marina Del Rey to Pico Rivera and travels primarily along Via Marina, Admiralty Way and Mindanao Way within the study area. This line runs Monday through Friday, at a frequency of 15-25 minutes during peak commute hours. The western terminus is at the intersection of Washington Boulevard and Palawan Way in Marina del Rey. The eastern terminus is at the intersection of Paramount Boulevard/Slauson Avenue in the City of Pico Rivera.

- CC Line 1 – Line 1 is a local east-west line that provides service from Venice through Culver City to West Los Angeles and travels primarily along Washington Boulevard in the vicinity of the study area. This line runs every day, including holidays, at a peak frequency of approximately 12 minutes during peak commute hours. The western terminus is at the intersection of Main Street/Windward Circle in Venice. The eastern terminus is at the intersection of Fairfax Avenue/Washington Boulevard in West Los Angeles.

- CC 2 – Culver City Bus Line 2 is a local east-west line that provides service from Venice High School to the Fox Hills Mall Transit Center and travels primarily along Lincoln Boulevard and Washington Boulevard within the study area. This line runs Monday through Friday at a frequency of approximately 60 minutes. Service is not provided on weekends and holidays.

- CC Line 7 – Line 7 is a recently added local east-west line that provides service from Marina del Rey to Culver City and travels primarily along Admiralty Way and Fiji Way within the study area. This line runs Monday through Saturday at a frequency of approximately 60 minutes. Service on Sundays and holidays is not provided. The western terminus is at Fisherman's Village in Marina del Rey. The eastern terminus is at the intersection of Culver Boulevard/Venice Boulevard in Culver City.

- SM 3 – Santa Monica Big Blue Bus Line 3 is a local north-south line that provides service from Westwood to Inglewood and travels primarily along Lincoln Boulevard within the study area. This line runs every day, including holidays, at a peak frequency of 10-12 minutes during peak commute hours. The northern terminus is at the University of California Los Angeles (UCLA) Ackerman Terminal in Westwood. The southern terminus is at the Metro Green Line Aviation Station in Inglewood.

- SM Rapid 3 – Santa Monica Bus Blue Bus Line Rapid 3 is a north-south "rapid bus" line that provides service from Santa Monica to Inglewood and travels primarily along Lincoln Boulevard within the study area. This line runs Monday through Friday at a frequency of 15 minutes with no midday service. Service is not provided on weekends and holidays. The northern terminus is at the intersection of 4th Street/Wilshire Boulevard in Santa Monica. The southern terminus is at the Metro Green Line Aviation Station in Inglewood.

- CE 437 – Line 437 is a LADOT Commuter Express line that provides service from Downtown Los Angeles to Marina del Rey and travels primarily along Via Marina, Admiralty Way and Mindanao Way within the study area. This line runs Monday through Friday at a peak frequency of approximately 15 minutes during peak commute hours. Service is not provided on weekends and holidays. The western terminus is at the intersection of Pacific Avenue/Washington Boulevard in Marina del Rey. The eastern terminus is at the intersection of San Pedro Street/Temple Street in Downtown Los Angeles.

These transit lines within the study area are illustrated in Figure 6.

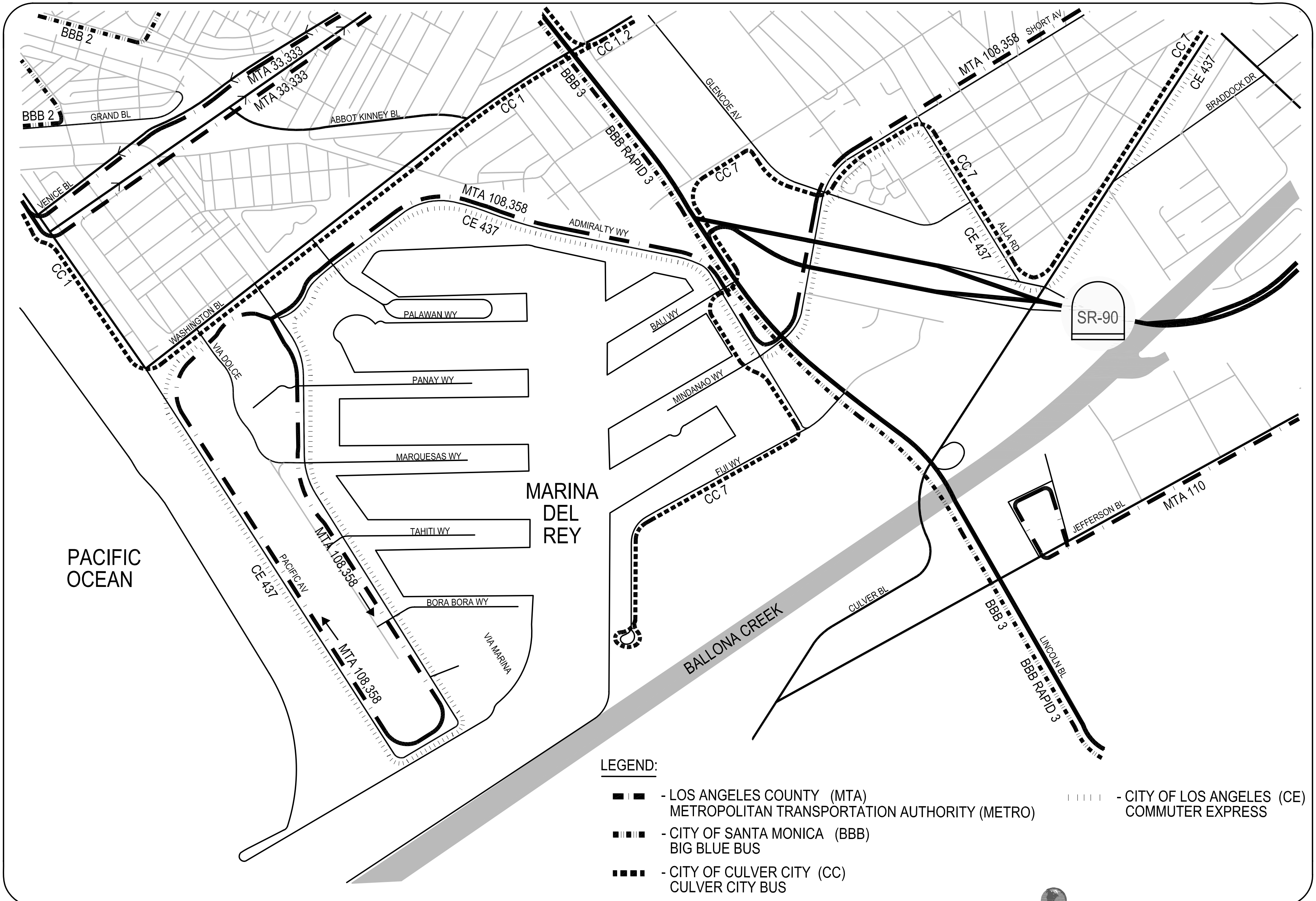


FIGURE 6
EXISTING TRANSIT LINES

RAJU Associates, Inc.

III. FUTURE AMBIENT TRAFFIC CONDITIONS

This chapter provides details of the development of travel forecasts for future ambient (2020) conditions and an assessment of the analysis of these forecasts. Appropriate comparisons to corresponding analyses from the 1991–1994 DKS Study are also presented in this chapter.

The estimates for future year (2020) ambient conditions traffic without the proposed LCP Amendment Project were first developed using estimates for natural “background” growth in area-wide trip making in the vicinity of the study area. Using these estimates of traffic volumes at each of the analysis intersections and the intersections lane geometry provided in Appendix A, intersection operating conditions were determined. A comparison to Ambient (2010) Conditions presented in the 1991–1994 DKS Study has been conducted and presented in this chapter.

Details of each of the above analysis and evaluation are presented in the following sections of this chapter.

AMBIENT (2020) TRAFFIC CONDITIONS

The assessment of Ambient (2020) Traffic Conditions involved the following tasks:

- Ambient (2020) Traffic projections
- Analysis of Ambient (2020) Traffic Conditions
- Comparison of Ambient (2020) Conditions to the Ambient (2010) Conditions presented in the 1991–1994 DKS Study

A brief discussion of each of the tasks in the previous page follows:

Future Ambient (2020) Traffic Projections

The Future Ambient (2020) traffic projections reflect growth in traffic from the natural “background” or ambient growth to reflect the effects of overall area-wide regional growth both within and outside the study area and the collective effects of many small developments.

Per historical traffic growth in the Marina, based on the County of Los Angeles Department of Public Works, traffic in the Marina was estimated to increase at a rate of about 0.6% per year. This growth rate was used to account for the ambient growth of traffic for intersections entirely in the Marina. Similarly, for the City of Los Angeles, traffic outside the Marina was estimated to increase at a rate of 0.5% per year.

The Ambient Growth factor of 0.5% per year was derived by examining the travel forecasts for base year (2003) and future year (2035) within and in the vicinity of the study area projected by the Southern California Association of Governments (SCAG) Regional Transportation Plan 2008 (RTP 2008) travel demand forecasting model, assessing the growth for the entire time period and dividing the same by the number of years of growth. Future increases in background traffic volumes due to regional growth and development are expected to continue at these rates. With the assumed completion date of 2020, the existing 2009 traffic volumes were adjusted upward by a factor of 6.6% for intersections entirely within the Marina and by 5.5% for all other external intersections. The resulting Future Ambient (2020) traffic volumes are attached in Appendix D.

<u>Future Ambient (2020) Traffic Conditions Analysis</u>

The Future Ambient (2020) without proposed project peak hour traffic volumes were analyzed at each of the study intersections to determine the V/C ratio and corresponding level of service. Table 5 presents the results of the Future Ambient (2020) (without project) traffic analysis. The results are also presented in Figures 7 and 8 for Ambient AM and PM peak hours, respectively. As indicated in the table, all 20 analyzed intersections in the morning peak hour and 19 analyzed intersections in the evening peak hour are projected to operate at LOS D or better. The remaining one (Culver Boulevard / Jefferson Boulevard intersection) in the evening peak hour is projected to operate at LOS E.

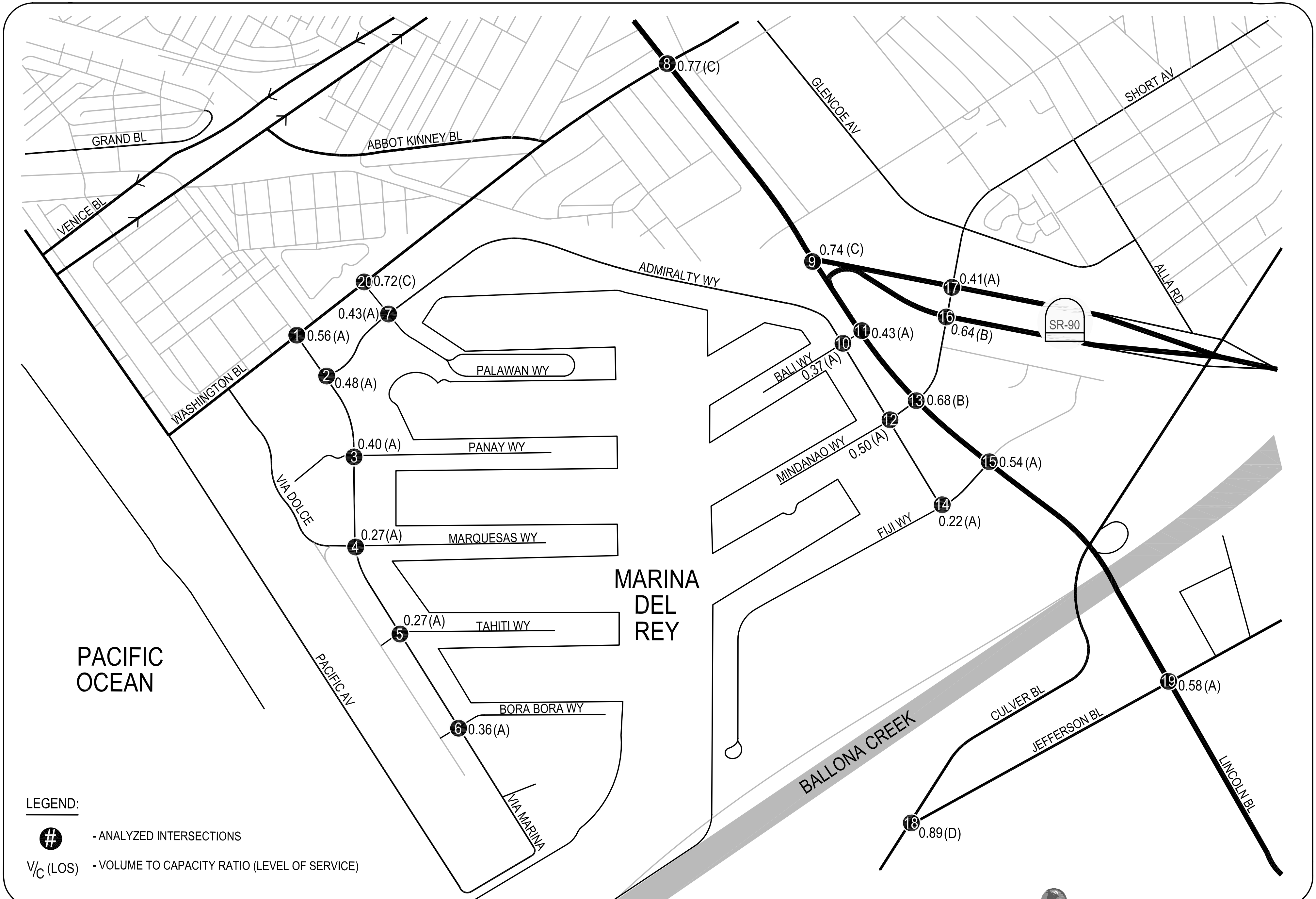


FIGURE 7
FUTURE AMBIENT (2020) LEVELS OF SERVICE - AM PEAK HOUR

RAJU Associates, Inc.

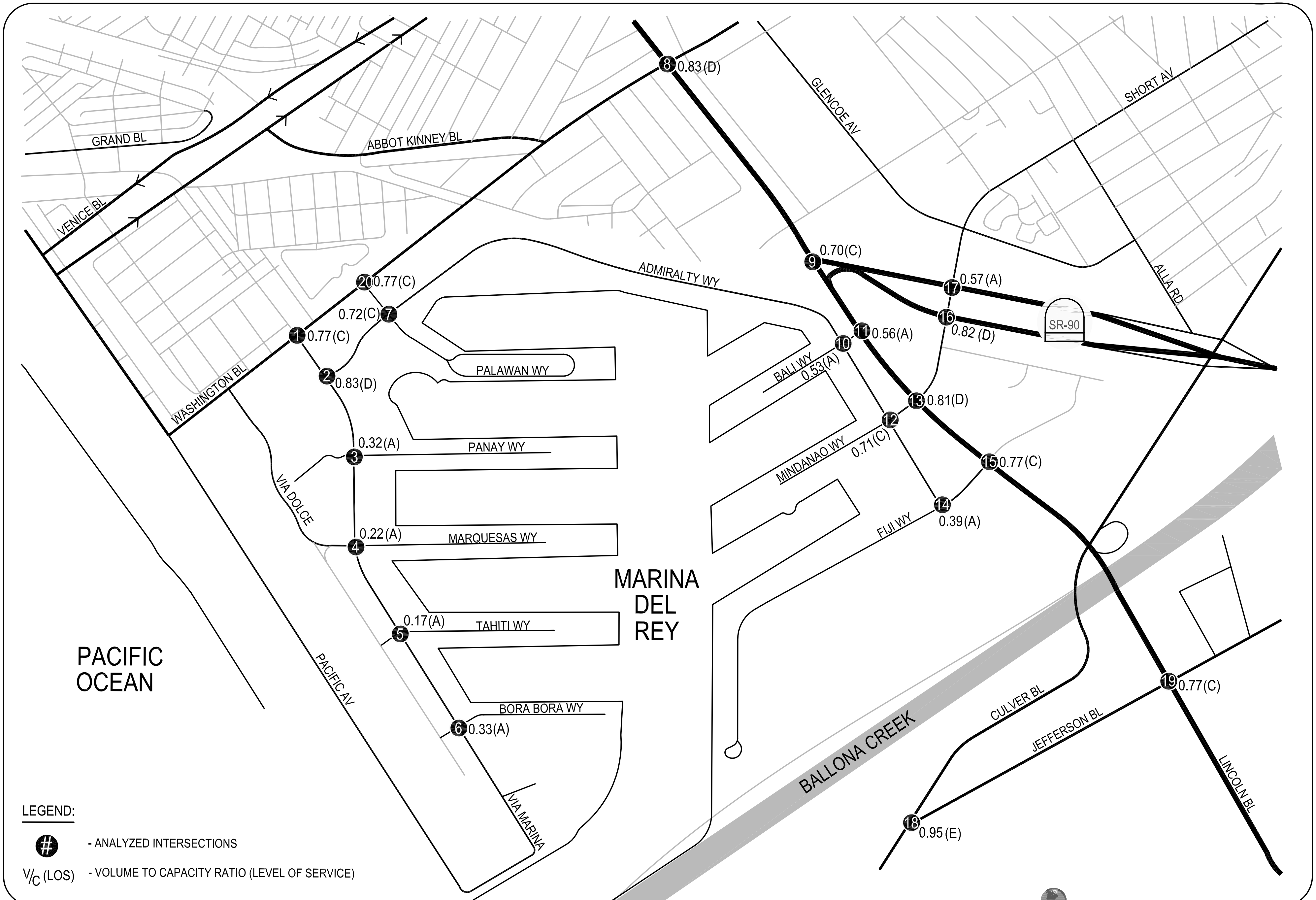


FIGURE 8
FUTURE AMBIENT (2020) LEVELS OF SERVICE - PM PEAK HOUR

RAJU Associates, Inc.

TABLE 5
SUMMARY OF LEVEL OF SERVICE ANALYSIS - FUTURE AMBIENT (2020) CONDITIONS

			1991/1994 Approved Study [2] Ambient (2010) Conditions		2009 Study Ambient (2020) Conditions		Difference in
Map □	INTERSECTION	Peak Hour	V/C	LOS	V/C	LOS	V/C
1	Via Marina □ Washington Boulevard	AM	0.75	C	0.56	A	-0.19
		PM	1.05	F	0.77	C	-0.28
2	Via Marina □ Admiralty Way	AM	0.56	A	0.48	A	-0.09
		PM	0.91	E	0.83	D	-0.08
3	Via Marina □ Panay Way	AM	0.63	B	0.40	A	-0.23
		PM	0.59	A	0.32	A	-0.27
4	Via Marina □ Marquesas Way	AM	0.35	A	0.27	A	-0.08
		PM	0.44	A	0.22	A	-0.22
5	Via Marina □ Tahiti Way	AM	0.46	A	0.27	A	-0.19
		PM	0.43	A	0.17	A	-0.26
6	Via Marina □ Bora Bora Way [1]	AM	0.38	A	0.36	A	-0.03
		PM	0.37	A	0.33	A	-0.04
7	Palawan Way □ Admiralty Way	AM	0.75	C	0.43	A	-0.32
		PM	1.16	F	0.72	C	-0.44
8	Lincoln Boulevard □ Washington Boulevard	AM	1.41	F	0.77	C	-0.65
		PM	1.67	F	0.83	D	-0.84
9	Lincoln Boulevard □ Marina Expressway	AM	1.16	F	0.74	C	-0.42
		PM	1.34	F	0.70	C	-0.64
10	Admiralty Way □ Bali Way	AM	0.63	B	0.37	A	-0.26
		PM	1.08	F	0.53	A	-0.55
11	Lincoln Boulevard □ Bali Way	AM	0.80	C	0.43	A	-0.37
		PM	1.14	F	0.56	A	-0.58

TABLE 5 (continued)
SUMMARY OF LEVEL OF SERVICE ANALYSIS - FUTURE AMBIENT (2020) CONDITIONS

			1991/1994 Approved Study [2] Ambient (2010) Conditions		2009 Study Ambient (2020) Conditions		Difference in
Map □	INTERSECTION	Peak Hour	V/C	LOS	V/C	LOS	V/C
12	Admiralty Way □ Mindanao Way	AM	0.88	D	0.50	A	-0.38
		PM	1.10	F	0.71	C	-0.39
13	Lincoln Boulevard □ Mindanao Way	AM	1.24	F	0.68	B	-0.56
		PM	1.26	F	0.81	D	-0.45
14	Admiralty Way □ Fiji Way	AM	0.35	A	0.22	A	-0.13
		PM	0.55	A	0.39	A	-0.16
15	Lincoln Boulevard □ Fiji Way	AM	0.80	C	0.54	A	-0.26
		PM	1.18	F	0.77	C	-0.41
16	Mindanao Way □ Marina Expressway EB	AM	1.20	F	0.64	B	-0.56
		PM	1.32	F	0.82	D	-0.50
17	Mindanao Way □ Marina Expressway WB	AM	0.83	D	0.41	A	-0.42
		PM	1.14	F	0.57	A	-0.57
18	Culver Boulevard □ Jefferson Boulevard	AM	1.28	F	0.89	D	-0.39
		PM	1.40	F	0.95	E	-0.45
19	Lincoln Boulevard □ Jefferson Boulevard	AM	1.42	F	0.58	A	-0.84
		PM	1.38	F	0.77	C	-0.61
20	Palawan Way □ Washington Boulevard [1]	AM	n□a	-	0.72	C	-
		PM	n□a	-	0.77	C	-

[1] Unsignalized intersection - stop-controlled on minor approach(es).
[2] Source: *Marina del Rey Traffic Study,* DKS Associates, January 1991
and *Marina del Rey Traffic Study Addendum-Final Report,* DKS Associates, May 1994

COMPARISON TO AMBIENT (2010) CONDITIONS IN THE 1991/1994 DKS STUDY

This study compared the Future Ambient (2020) scenario to the Future Ambient (2010) conditions presented in the approved 1991/1994 DKS Study. This comparison is also presented in Table 5. From Table 5, it can be observed that all of the analyzed intersections under Future Ambient (2020) conditions are projected to operate at better V/C ratios and levels of service than the Future Ambient (2010) conditions described in the approved 1991/1994 DKS Study.

Capacity calculation worksheets for Future Ambient (2020) conditions are attached in Appendix D of the report.

IV. PROJECT TRAFFIC CONDITIONS

The Proposed Project, namely the Marina del Rey Local Coastal Project Amendment involves a single aggregate amendment that accommodates the changes to the land uses and their locations due to the proposed Pipeline Projects as well as the changes to the transportation improvement measures being contemplated as part of the amendment. These changes to the transportation improvement measures are consistent with the proposed land uses changes and the prevailing travel demand changes projected in the future.

This chapter provides a detailed description of the Pipeline Projects and the scenarios analyzed as part of this study. Additionally, the Proposed LCP Buildout (including Pipeline Projects) description and the scenarios evaluated as part of this study are also detailed in this chapter. The results of all these analyses and evaluations along with relevant comparisons to future ambient conditions and future conditions with approved LCP Project described in the approved 1991–1994 DKS Study are presented in this chapter.

PROPOSED PROJECT DESCRIPTION

The five “Pipeline Projects” that require an amendment to the LCP involve the following parcels and uses:

- Parcels 10–FF: 536 dwelling units replacing 136 dwelling units, a net total of 390 dwelling units
- Parcels 33–NR: 292 dwelling units, 32,400 square feet of retail space, 323 restaurant seats and 69 public parking spaces, replacing 191 public parking spaces
- Parcels OT–21: Parcel OT includes 114-room senior active accommodations, 5,000 square feet of retail space and 92 public parking spaces. OT currently has186 public parking spaces, 92 of which will remain and 94 spaces will be built in Parcel 21; Parcel 21 includes a net increase of 6,000 square feet of office space, a net decrease of 6,000 square feet of health club and 94 public parking spaces (as a replacement for 94 spaces

from OT), Parcel 21 also includes 2,300 square feet of office space and 5,000 square feet of yacht club transferred from Parcel 20.

- Parcels 49–77: Option 1 -135,000 square feet of visitor-serving commercial space; Option 2 – 116,495 square feet of visitor-serving commercial space and 255 dwelling units; Option 3 – Up to 26,000 square feet of office use (Department of Beaches and Harbor Administration Building) with either Option 1 or Option 2.
- Parcels 52–GG: 375 dry stack spaces, 3,080 square feet of office use and 3,350 square feet of Sheriff's boatwright shop (existing).

The Marina del Rey Land Use Plan (LUP) allocates the future development potential within Marina del Rey. In order to do so, three major development zones (MDZs) were identified. Within a major development zone, the various land uses have been aggregated. A table showing approved LCP development and proposed LCP Amendment including Pipeline Projects, by development zones is attached in Appendix E. Appendix E also provides the correspondence between development zones in approved LCP and the Major Development Zones (MDZs).

The proposed LCP Amendment (Pipeline Projects) is a component of the overall buildout of Marina provided by the currently approved Local Coastal Program. In order to analyze the effects of the proposed pipeline projects both independently as well as within the context of the overall buildout of the Marina, two sets of traffic scenarios have been analyzed. They include:

- Ambient (2020) Conditions with Pipeline Projects
- Ambient (2020) Conditions with Proposed LCP Buildout (including Pipeline Projects)

AMBIENT (2020) WITH PIPELINE PROJECTS TRAFFIC CONDITIONS

The traffic analysis and evaluation of this scenario involves the following key elements:

- Development of traffic forecasts with Pipeline Projects
- Operational analysis of traffic conditions with Pipeline Projects
- Comparison of traffic conditions with the Ambient conditions in the approved LCP 1991–1994 DKS Study

Ambient (2020) With Pipeline Projects Traffic Projections

The traffic projections for Ambient (2020) with Pipeline Projects conditions consists of two components namely the Pipeline Projects-only traffic forecasts and the Future Ambient (2020) traffic projections developed in Chapter 3. The Pipeline Project-only traffic volumes were developed in the following manner:

Trip Generation of Pipeline Projects

The trips generated by the various proposed pipeline projects were computed using rates listed in *Appendix G of the approved Marina del Rey LCP*, and the *Institute of Transportation Engineers (ITE), Trip Generation, Informational Report, 8th Edition.*

Table 6 summarizes the trip generation for the LCP Pipeline Projects. From Table 6, it can be observed that the five Pipeline Projects' trip generation would result in a total of approximately 14,405 daily trips of which 706 trips (246 inbound, 460 outbound) would occur during the morning peak hour and 1,163 trips (610 inbound, 553 outbound) would occur during the evening peak hour.

Trip Distribution and Assignment

Trip distribution defines the percentage of trips to and from each of the areas within Marina del Rey to the boundaries of the study area along various roadway facilities in the network. Traffic assignment defines the paths that these trips take to and from each of the areas to the boundaries of the study area.

The geographic regional trip distribution was based on several methods from different sources. These methods included directional traffic distribution from previous studies; professional judgement and local knowledge on distribution of trips to and from the Marina; regional origin/destination information for trips using the latest Southern California Association of Governments' (SCAG's) Regional Transportation Plan (RTP) 2008 Travel Demand Model; and existing traffic patterns observed in the current counts. An iterative process to assign the trips generated by the various proposed project areas was employed.

TABLE 6
LCP AMENDMENT PIPELINE PROJECTS TRIP GENERATION ESTIMATES

MDZ□	Parcel	Redevelopment Proposed - Pipeline Projects	Land Use	Size	Daily Trips	AM Peak Hour			PM Peak Hour		
						In	Out	Total	In	Out	Total
1	**10/FF** [1]	Apartment 526 units; To be removed: Apartment -136 units	Residential	390 DU	2,594	40	159	199	83	44	127
2	**33/NR** [2]	Apartment 292 units, Retail 32,400 s.f., Restaurant 323 seats □ 69 public parking spaces; To be removed: public parking lot 191 spaces	Residential Restaurant Retail	292 DU 323 seats 32.4 KSF	1,942 924 1,391	30 5 20	119 5 12	149 10 32	62 54 71	33 27 73	95 81 144
2	**OT** [3]	Parcel OT includes 114-room senior active accommodations, 5,000 square feet of retail space and 92 public parking spaces, replacing 186 public parking spaces;	Congregate Care Retail	114 DU 5 KSF	230 215	4 3	3 2	7 5	10 11	9 11	19 22
3	**49/77**	Opt. 1. - 135 KSF VSC, Opt. 2. - 116.495 KSF VSC □ 255 DUs, Opt. 3 - up to 26 KSF DBH Adm. Bldg. w□either Opt1 or Opt 2.	Visitor Serving Comm. Residential Office	116.495 KSF 255 DU 26 KSF	5,002 1,696 286	71 26 35	45 104 5	116 130 40	253 54 10	264 29 47	517 83 57
3	**52/GG** [4]	375 Dry Storage Spaces, 3.08 KSF Office and 3.35 KSF Sheriff Boatwright	Dry Storage Spaces	375 spaces	125	12	6	18	2	16	18
				LCP Amendment Pipeline Projects Total Trip Generation	**14,405**	**246**	**460**	**706**	**610**	**553**	**1,163**
				Trip Generation Rates [5]							
			Residential	Per dwelling unit	6.65	20□	80□	0.51	65□	35□	0.326
			Congregate Care	Per dwelling unit	2.02	59□	41□	0.06	55□	45□	0.17
			Hotel	Per room	8.17	61□	39□	0.56	53□	47□	0.353
			Retail□VSC	Per 1,000 s.f.	42.94	61□	39□	1.00	49□	51□	4.44
			Restaurant	Per seat	2.86	50□	50□	0.03	67□	33□	0.25
			Office	Per 1,000 s.f.	11.01	88□	12□	1.55	17□	83□	2.21
			Dry Storage Spaces [6]	Per space	0.334	65□	35□	0.048	8□	92□	0.048

[1] Parcel FF proposed to become Parcel 14.
[2] Parcel NR proposed to be merged into Parcel 33.
[3] Parcel OT proposed to become Parcel 147.
[4] Parcel GG proposed to be merged into Parcel 52.
[5] Unless noted otherwise, PM peak hour trip generation rates from *Appendix G-Transportation Improvement Program of Marina del Rey Local Implementation Program*. Daily and AM trip generations rates and PM distribution split is based on *ITE, Trip Generation, 8th Edition, Informational Report*
[6] Trip generation for dry storage spaces from *Traffic Analysis for Dry Stack Boat Storage* , Linscott, Law □ Greenspan, Engineers, February 28, 2008.

The geographic regional trip distribution for project trips for each land use was refined using the methods discussed above and has been generally determined to be the following:

	Residential	Commercial	Hotel	Office	Congregate Care
To and From the North:	25%	25%	25%	20%	50%
(Lincoln Bl, Pacific Av, etc.)					
To and From the South:	35%	30%	35%	35%	20%
(Lincoln Bl, Vista del Mar, etc.)					
To and From the East:	30%	35%	35%	35%	25%
(Washington Bl, Jefferson Bl, SR-90)					
To and From the West:	10%	10%	5%	10%	5%
(Washington Bl, Culver Bl)					
Total	100%	100%	100%	100%	100%

Based on these distribution assumptions, location and points of access, and trip generation from the Proposed Project, traffic estimates of the Pipeline Projects-only trips were developed. The project-only trips for the Pipeline Projects are attached in Appendix F.

Utilizing the Pipeline Projects-only traffic estimates developed for both AM and PM peak hours, traffic forecasts for the Future Ambient (2020) with Pipeline Projects (without improvements) conditions were developed. The Future Ambient (2020) traffic forecasts were combined with the Pipeline Projects-only traffic volumes to obtain the Future Ambient (2020) with Pipeline Projects traffic volume forecasts. The Future Ambient (2020) with Pipeline Projects traffic volumes during both A.M. and P.M. peak hours are also attached in Appendix F.

FUTURE AMBIENT (2020) WITH PIPELINE PROJECTS ANALYSIS AND EVALUATION

The Future Ambient (2020) with Pipeline Projects peak hour traffic volumes were analyzed to determine the volume to capacity (V/C) ratio and LOS at each of the analyzed intersections. The results of this analysis are also summarized on Table 7. These results are also presented in Figures 9 and 10 for AM and PM peak hours, respectively.

TABLE 7
SUMMARY OF LEVEL OF SERVICE ANALYSIS - LCP AMENDMENT (PIPELINE PROJECTS)

Map □	INTERSECTION	Peak Hour	1991/1994 Approved Study [2] Ambient (2010) Conditions V/C	LOS	2009 Study Ambient (2020) w/LCP Amendment (Pipeline Projects) V/C	LOS	Difference in V/C
1	Via Marina □ Washington Boulevard	AM	0.75	C	0.61	B	-0.14
		PM	1.05	F	0.84	D	-0.21
2	Via Marina □ Admiralty Way	AM	0.56	A	0.53	A	-0.03
		PM	0.91	E	0.91	E	0.00
3	Via Marina □ Panay Way	AM	0.63	B	0.44	A	-0.19
		PM	0.59	A	0.33	A	-0.26
4	Via Marina □ Marquesas Way	AM	0.35	A	0.38	A	0.03
		PM	0.44	A	0.29	A	-0.15
5	Via Marina □ Tahiti Way	AM	0.46	A	0.27	A	-0.19
		PM	0.43	A	0.18	A	-0.26
6	Via Marina □ Bora Bora Way [1]	AM	0.38	A	0.36	A	-0.02
		PM	0.37	A	0.33	A	-0.04
7	Palawan Way □ Admiralty Way	AM	0.75	C	0.54	A	-0.22
		PM	1.16	F	0.83	D	-0.33
8	Lincoln Boulevard □ Washington Boulevard	AM	1.41	F	0.80	C	-0.61
		PM	1.67	F	0.89	D	-0.78
9	Lincoln Boulevard □ Marina Expressway	AM	1.16	F	0.75	C	-0.41
		PM	1.34	F	0.73	C	-0.61
10	Admiralty Way □ Bali Way	AM	0.63	B	0.41	A	-0.22
		PM	1.08	F	0.63	B	-0.45
11	Lincoln Boulevard □ Bali Way	AM	0.80	C	0.44	A	-0.36
		PM	1.14	F	0.61	B	-0.53

TABLE 7 (continued)
SUMMARY OF LEVEL OF SERVICE ANALYSIS - LCP AMENDMENT (PIPELINE PROJECTS)

			1991/1994 Approved Study [2] Ambient (2010) Conditions		2009 Study Ambient (2020) w/LCP Amendment (Pipeline Projects)		Difference in
Map □	INTERSECTION	Peak Hour	V/C	LOS	V/C	LOS	V/C
12	Admiralty Way □ Mindanao Way	AM	0.88	D	0.67	B	-0.21
		PM	1.10	F	0.88	D	-0.22
13	Lincoln Boulevard □ Mindanao Way	AM	1.24	F	0.75	C	-0.49
		PM	1.26	F	0.88	D	-0.38
14	Admiralty Way □ Fiji Way	AM	0.35	A	0.25	A	-0.10
		PM	0.55	A	0.44	A	-0.11
15	Lincoln Boulevard □ Fiji Way	AM	0.80	C	0.58	A	-0.22
		PM	1.18	F	0.85	D	-0.33
16	Mindanao Way □ Marina Expressway EB	AM	1.20	F	0.73	C	-0.47
		PM	1.32	F	0.86	D	-0.46
17	Mindanao Way □ Marina Expressway WB	AM	0.83	D	0.43	A	-0.40
		PM	1.14	F	0.62	B	-0.52
18	Culver Boulevard □ Jefferson Boulevard	AM	1.28	F	0.89	D	-0.39
		PM	1.40	F	0.95	E	-0.45
19	Lincoln Boulevard □ Jefferson Boulevard	AM	1.42	F	0.59	A	-0.83
		PM	1.38	F	0.78	C	-0.61
20	Palawan Way □ Washington Boulevard [1]	AM	n□a	-	0.77	C	-
		PM	n□a	-	0.88	D	-

[1] Unsignalized intersection - stop-controlled on minor approach(es).
[2] Source: *Marina del Rey Traffic Study,* DKS Associates, January 1991
and *Marina del Rey Traffic Study Addendum-Final Report,* DKS Associates, May 1994

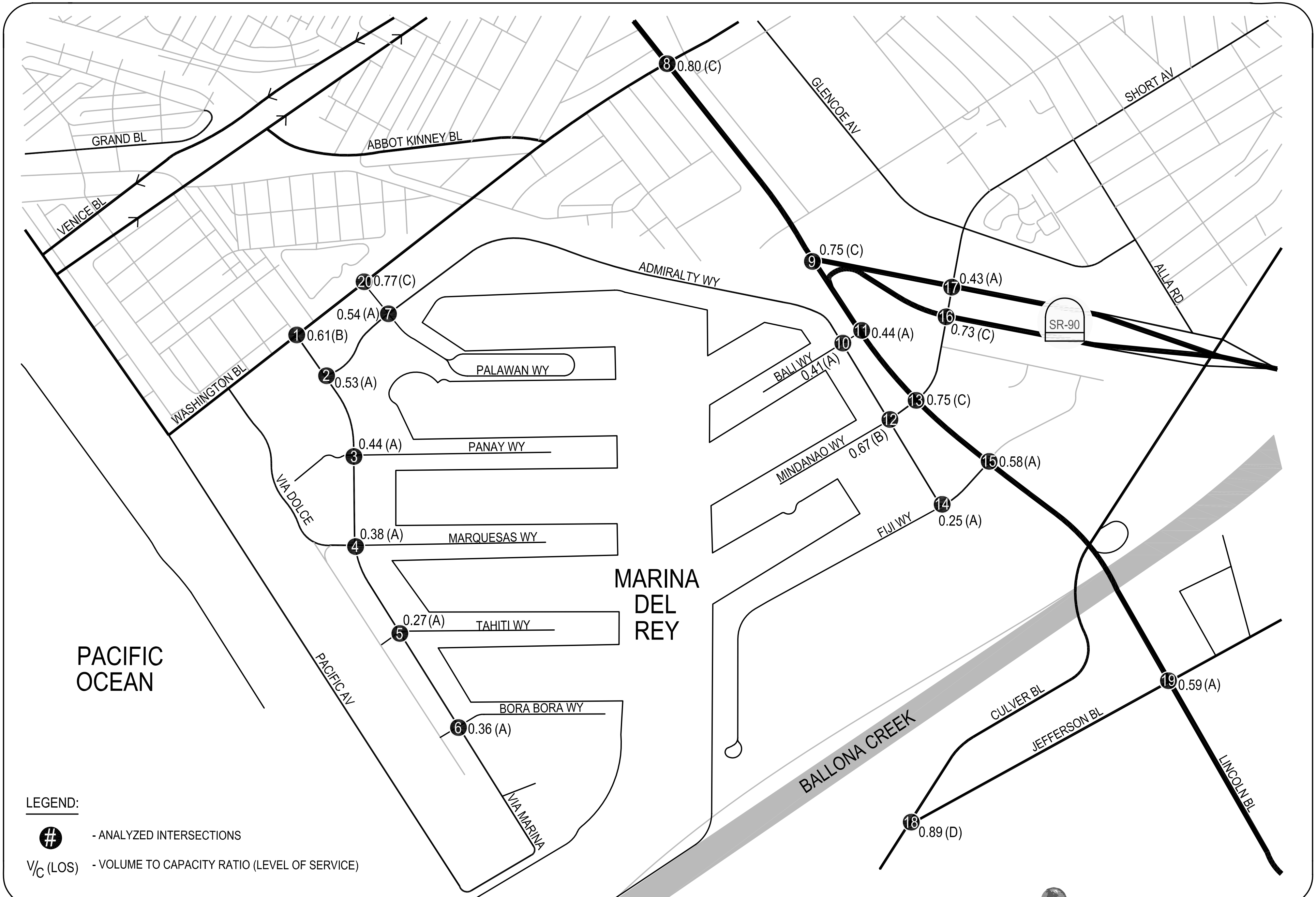


FIGURE 9
FUTURE AMBIENT (2020) WITH PIPELINE PROJECTS AM PEAK HOUR LEVELS OF SERVICE

RAJU Associates, Inc.

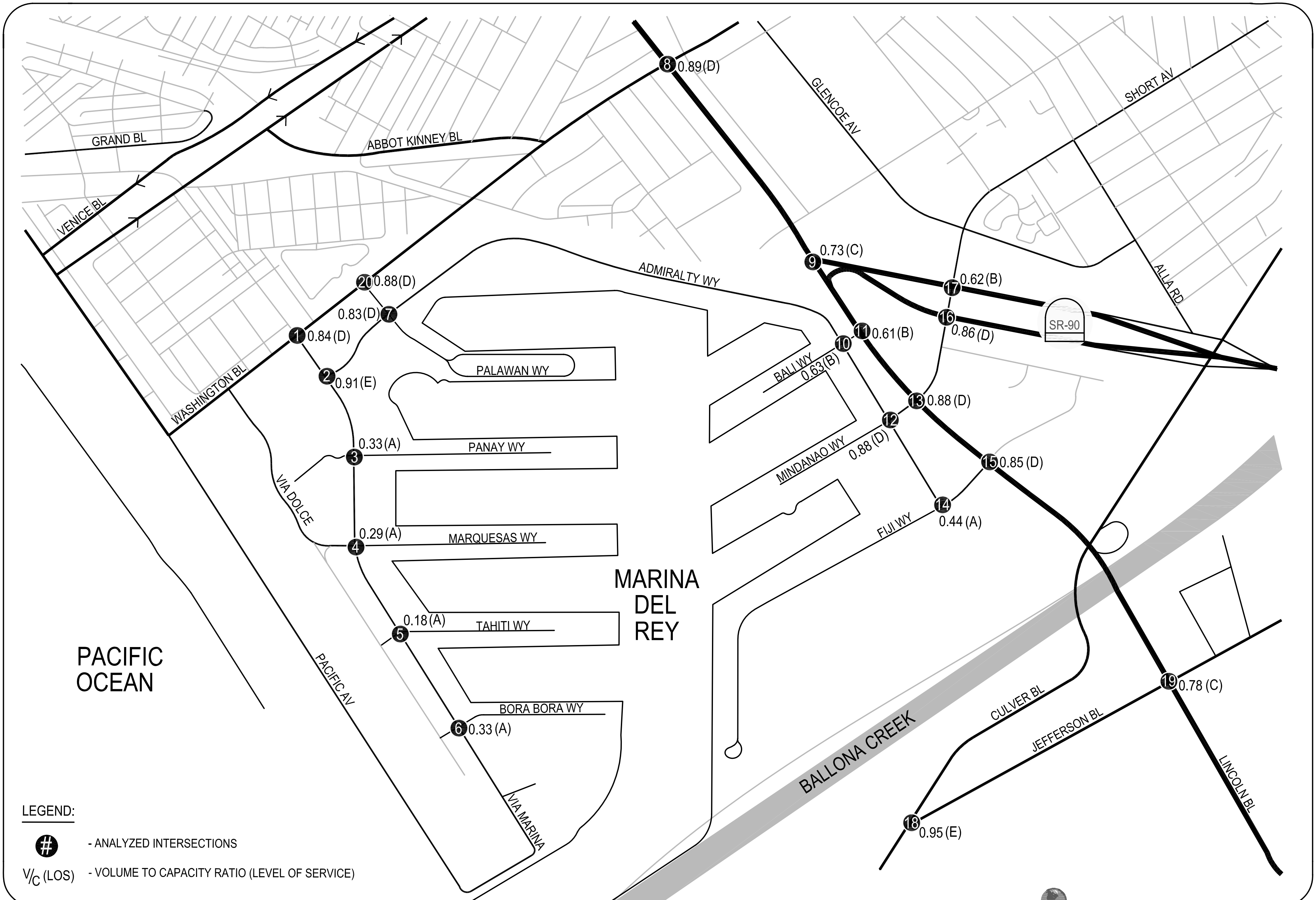


FIGURE 10
FUTURE AMBIENT (2020) WITH PIPELINE PROJECTS PM PEAK HOUR LEVELS OF SERVICE

RAJU Associates, Inc.

From the tables it can be observed that all 20 analyzed intersections in the morning peak hour and 18 of the 20 intersections in the evening peak hour are projected to operate at LOS D or better. The remaining intersections during P.M. peak hour are projected to operate at LOS E or F. The locations that are operating at LOS E or F include the following:

<u>PM Peak Hour</u>

- Via Marina/Admiralty Way – LOS E
- Culver Boulevard/Jefferson Boulevard- LOS E

Capacity calculation worksheets for Future Ambient (2020) with Pipeline Projects conditions are attached in Appendix F of the report.

COMPARISON TO AMBIENT CONDITIONS IN THE 1991/94 DKS STUDY

Table 7 also compares the Future Ambient (2020) with LCP Amendment Pipeline Projects conditions to the Future Ambient conditions described in the approved 1991/1994 DKS Study. It can be observed from this comparison that all of the analyzed intersections under Future Ambient (2020) with LCP Amendment Pipeline Projects conditions are projected to operate at better V/C ratios and levels of service than the Future Ambient conditions from the approved 1991/1994 DKS Study.

AMBIENT (2020) WITH PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS) TRAFFIC CONDITIONS

The traffic analysis and evaluation of this scenario consisting of all unbuilt entitlements including pipeline projects and entitlement equivalent to less than that provided in the approved LCP involves the following key elements:

- Development of traffic projections with Proposed Buildout in Marina del Rey area including the Proposed Pipeline Projects
- Operational analysis of traffic conditions
- Comparison of traffic conditions with the Ambient plus project conditions described in the approved LCP 1991/1994 DKS Study

Ambient (2020) With Proposed Buildout (including Pipeline Projects) Traffic Projections

The traffic projections for this scenario also consists of two components – Proposed LCP Buildout (including Pipeline Projects) only traffic forecasts and the Future Ambient (2020) traffic projections developed and presented in Chapter 3.

The Proposed LCP Buildout (including Pipeline Projects) traffic forecasts were developed in a manner similar to the process described in the Ambient (2020) with Pipeline Projects traffic projections section. A brief description of the process follows.

Proposed LCP Buildout (including Pipeline Projects) Traffic Volumes

This Proposed LCP Buildout scenario within the Marina del Rey LCP area also includes the changes contemplated due to the Pipeline Projects. A summary of the major development zones (MDZs) including the associated parcels and the amount of potential development allocated to each MDZ is included below:

Major Development Zone (MDZ) 1
Parcels: 1, 3, 112, 113, BR, 7, 8, 9, 111, 10, 12, 13, FF (proposed to become Parcel 14), 15, 18, 20, 95, 100, 101, 102, 103, 104, DS, LLS, AL-1, K-6
Potential Development Available within this Zone -

- Residential Units: 1,497 dwelling units
- Hotel: 288 rooms
- Retail: 53,000 square feet of retail spaces
- Restaurant: 340 restaurant seats
- Congregate Care: 15 dwelling units

Major Development Zone (MDZ) 2
Parcels: 27, 28, 30, 33, 91, 97, 140, 141, 145, IR, H, JS, NR (proposed to be merged into Parcel 33), 125, 128, 129, OT (proposed to become Parcel 147), P, Q, RR, 21, 22, GR
Potential Development Available within this Zone –

- Residential Units: 292 dwelling units
- Hotel: 217 rooms
- Retail: 42,000 square feet of retail space
- Restaurant: 410 restaurant seats
- Congregate Care: 114 dwelling units
- Fire Station Expansion

Major Development Zone (MDZ) 3

Parcels: 40, 94, 130, 131, 132, 133, 134, SS, 41, 42, 43, 44, 45 (new parcel created from a portion of Parcel 44), 75, 76, 150, UR, 47, 48, 49, 50, 52, 53, 54, 77, EE, GG (proposed to be merged into Parcel 52), 55, 56, 61, BB, W, 62, 64, 65, XT, 51, 200

Potential Development Available within this Zone

- Residential Units: 255 dwelling units
- Retail: 178,741 square feet of retail space
- Restaurant: 573 restaurant seats
- Office: 26,000 square feet of office space
- Dry Stack: 375 spaces
- Library: 3,000 square feet
- Ferry Terminal Site

Proposed Local Coastal Program Buildout - Overall Total Potential Development (including Pipeline Projects)

- Residential Units: 2,044 dwelling units
- Hotel: 505 rooms
- Visitor-Serving Commercial: 273,741 square feet of retail space
- Restaurant: 1,323 restaurant seats
- Congregate Care: 129 dwelling units
- Office: 26,000 square feet of office space
- Dry Stack: 375 spaces
- Library: 3,000 square feet
- Ferry Terminal Site
- Fire Station Expansion

Trip Generation Estimates

The trip generation was determined for each of the MDZs. For daily trips and the morning peak hour, trips generation rates provided in the *ITE, Trip Generation Informational Report (8th Edition)* were utilized. For the evening peak hour, trip generation rates for the various uses in the Marina specified in *Appendix G of the Marina del Rey Local Implementation Program of the LCP* were used. Table 8 presents details of the trip generation including type of use, size, applicable rate and trip generation estimates.

TABLE 8
PROPOSED LCP BUILDOUT TRIP GENERATION ESTIMATES BY MAJOR DEVELOPMENT ZONE

MDZ□	Parcels in DZ	Land Use	Size	Daily Trips	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
1	1, 3, 112, 113,BR,7,8,9,111	Residential	1,497 DU	9,956	153	610	763	318	170	488
	10,12,13,FF [1],15,18,20,95,	Hotel	288 rooms	2,353	98	63	161	54	48	102
	100,101,102,103,104,DS,	Retail	53 KSF	2,275	32	21	53	115	120	235
	LLS, AL-1, K-6	Restaurant	340 seats	972	5	5	10	57	28	85
		Congregate Care	15 DU	30	1	0	1	2	1	3
			MDZ 1 Trip Generation Total	**15,586**	**289**	**699**	**988**	**546**	**367**	**913**
2	21,22,GR,27,28,30,33,91,97,	Residential	292 DU	1,942	30	119	149	62	33	95
	140,141,145,IR,H,JS,NR [2]	Hotel	217 rooms	1,773	74	48	122	41	36	77
	125,128,129,OT [3],P,Q,RR	Retail	42 KSF	1,804	26	16	42	91	95	186
		Restaurant	410 seats	1,173	6	6	12	69	34	103
		Congregate Care	114 DU	230	4	3	7	10	9	19
		Fire Station	n□a	0	0	0	0	0	0	0
			MDZ 2 Trip Generation Total	**6,922**	**140**	**192**	**332**	**273**	**207**	**480**
3	40,94,130,131,132,133,134	Residential	255 DU	1,696	26	104	130	54	29	83
	SS,41,42,43,44,75,76,150	Retail	178.741 KSF	7,675	108	70	178	389	405	794
	UR,47,48,49,50,52,53,54,	Restaurant	573 seats	1,639	10	8	18	97	47	144
	77,EE,GG [4],55,56,61,BB,	Office	26 KSF	286	35	5	40	10	47	57
	W,62,64,65,XT,51,200	Dry Storage Spaces	375 spaces	125	12	6	18	2	16	18
		Library	3 KSF	169	2	1	3	7	7	14
		Ferry Terminal	n□a	0	0	0	0	0	0	0
			MDZ 3 Trip Generation Total	**11,590**	**193**	**194**	**387**	**559**	**551**	**1,110**
			LCP Amendment Total Trip Generation	**34,098**	**622**	**1,085**	**1,707**	**1,378**	**1,125**	**2,503**
			Trip Generation Rates [5]							
		Residential	Per dwelling unit	6.65	20□	80□	0.51	65□	35□	0.326
		Hotel	Per room	8.17	61□	39□	0.56	53□	47□	0.353
		Congregate Care	Per dwelling unit	2.02	59□	41□	0.06	55□	45□	0.17
		Retail□VSC	Per 1,000 s.f.	42.94	61□	39□	1.00	49□	51□	4.44
		Restaurant	Per seat	2.86	50□	50□	0.03	67□	33□	0.25
		Office	Per 1,000 s.f.	11.01	88□	12□	1.55	17□	83□	2.21
		Library	Per 1,000 s.f.	56.24	71□	29□	1.04	48□	52□	4.74
		Dry Storage Spaces [6]	Per space	0.334	65□	35□	0.048	8□	92□	0.048

[1] Parcel FF proposed to become Parcel 14.
[2] Parcel NR proposed to be merged into Parcel 33.
[3] Parcel OT proposed to become Parcel 147.
[4] Parcel GG proposed to be merged into Parcel 52.
[5] PM peak hour trip generation rates from *Appendix G-Transportation Improvement Program of Marina del Rey Local Implementation Program* .
Daily and AM trip generations rates and PM distribution split is based on *ITE, Trip Generation, 8th Edition, Informational Report*
[6] Trip generation for dry storage spaces from *Traffic Analysis for Dry Stack Boat Storage* , Linscott, Law □ Greenspan, Engineers, February 28, 2008.

From Table 8, it can be observed that the trip generation for MDZ 1 would result in a total of approximately 15,586 daily trips of which 988 trips (289 inbound, 699 outbound) would occur during the morning peak hour and 913 trips (546 inbound, 367 outbound) would occur during the evening peak hour.

The trip generation for MDZ 2 would result in a total of approximately 6,922 daily trips of which 332 trips (140 inbound, 192 outbound) would occur during the morning peak hour and 480 trips (273 inbound, 207 outbound) would occur during the evening peak hour.

The trip generation for MDZ 3 would result in a total of approximately 11,590 daily trips of which 387 trips (193 inbound, 194 outbound) would occur during the morning peak hour and 1,110 trips (559 inbound, 551 outbound) would occur during the evening peak hour.

Table 8 summarizes the Proposed LCP Buildout by Major Development Zone. It also summarizes the total trip generation of the Proposed LCP Buildout (including Pipeline Projects), by MDZ, as noted above.

The Proposed LCP Buildout scenario would generate less than the amount of trips in the approved LCP during the evening peak hour. As indicated in the table, the Proposed LCP Buildout trip generation would result in an overall total of approximately 34,098 daily trips of which 1,707 trips (622 inbound, 1,085 outbound) would occur during the morning peak hour and 2,503 trips (1,378 inbound, 1,125 outbound) would occur during the evening peak hour.

Trip Distribution and Assignment

Using the same trip distribution and assignment process described earlier in this chapter, the Proposed LCP Buildout only traffic volumes were developed. These traffic volumes are attached in Appendix G.

Utilizing the traffic volumes presented in Appendix G and the Future Ambient (2020) traffic forecasts, the Future Ambient (2020) with the Proposed LCP Buildout traffic projections were developed. These traffic projections are also attached in Appendix G.

Future Ambient (2020) with Proposed LCP Buildout Traffic Conditions Analysis

The Future Ambient (2020) with Proposed LCP Buildout (including Pipeline Projects) peak hour traffic volumes were analyzed to determine the volume to capacity (V/C) ratio and LOS at each of the analyzed intersections. The results of this analysis are summarized on Table 9. They are also presented in Figures 11 and 12 for AM and PM peak hours, respectively. As indicated in the table, all 20 analyzed intersections in the morning peak hour and 10 of the 20 intersections in the evening peak hour are projected to operate at LOS D or better. The remaining intersections are projected to operate at LOS E or F.

These locations include the following:

<u>PM Peak Hour</u>

- Via Marina/Washington Boulevard – LOS E
- Via Marina/Admiralty Way – LOS F
- Palawan Way/Admiralty Way – LOS E
- Lincoln Boulevard/Washington Boulevard – LOS E
- Admiralty Way/Mindanao Way – LOS F
- Lincoln Boulevard/Mindanao Way – LOS E
- Lincoln Boulevard/Fiji Way – LOS E
- Mindanao Way/Marina Expressway (SR-90) Eastbound – LOS E
- Culver Boulevard/Jefferson Boulevard – LOS E
- Washington Boulevard/Palawan Way – LOS E

Capacity calculation worksheets for Future Ambient (2020) with Proposed LCP Buildout (including pipeline projects) are attached in Appendix G of the report.

TABLE 9
SUMMARY OF LEVEL OF SERVICE ANALYSIS - PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS)

			1991/1994 Study [2] Future Ambient (2010) w/ Approved LCP Development without Mitigations		2009 Study Future (2020) with Proposed LCP Buildout (incl. Pipeline Projects) without Improvements		Difference in
Map □	INTERSECTION	Peak Hour	V/C	LOS	V/C	LOS	V/C
1	Via Marina □ Washington Boulevard	AM	1.04	F	0.74	C	-0.30
		PM	1.38	F	0.97	E	-0.41
2	Via Marina □ Admiralty Way	AM	0.85	D	0.63	B	-0.22
		PM	1.23	F	1.04	F	-0.19
3	Via Marina □ Panay Way	AM	0.81	D	0.65	B	-0.16
		PM	0.74	C	0.47	A	-0.27
4	Via Marina □ Marquesas Way	AM	0.45	A	0.43	A	-0.02
		PM	0.53	A	0.35	A	-0.18
5	Via Marina □ Tahiti Way	AM	0.58	A	0.31	A	-0.27
		PM	0.53	A	0.19	A	-0.34
6	Via Marina □ Bora Bora Way [1]	AM	0.49	A	0.41	A	-0.09
		PM	0.46	A	0.35	A	-0.11
7	Palawan Way □ Admiralty Way	AM	0.92	E	0.68	B	-0.24
		PM	1.34	F	0.93	E	-0.41
8	Lincoln Boulevard □ Washington Boulevard	AM	1.47	F	0.86	D	-0.62
		PM	1.62	F	0.98	E	-0.64
9	Lincoln Boulevard □ Marina Expressway	AM	1.21	F	0.78	C	-0.43
		PM	1.37	F	0.77	C	-0.60
10	Admiralty Way □ Bali Way	AM	0.81	D	0.51	A	-0.30
		PM	1.28	F	0.76	C	-0.52
11	Lincoln Boulevard □ Bali Way	AM	0.83	D	0.45	A	-0.38
		PM	1.17	F	0.68	B	-0.50

TABLE 9 (continued)
SUMMARY OF LEVEL OF SERVICE ANALYSIS - PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS)

			1991/1994 Study [2] Future Ambient (2010) w/ Approved LCP Development without Mitigations		2009 Study Future (2020) with Proposed LCP Buildout (incl. Pipeline Projects) without Improvements		Difference in
Map □	INTERSECTION	Peak Hour	V/C	LOS	V/C	LOS	V/C
12	Admiralty Way □ Mindanao Way	AM	0.92	E	0.85	D	-0.07
		PM	1.18	F	1.01	F	-0.17
13	Lincoln Boulevard □ Mindanao Way	AM	1.21	F	0.84	D	-0.37
		PM	1.25	F	0.96	E	-0.29
14	Admiralty Way □ Fiji Way	AM	0.78	C	0.28	A	-0.50
		PM	1.08	F	0.51	A	-0.57
15	Lincoln Boulevard □ Fiji Way	AM	0.83	D	0.61	B	-0.22
		PM	1.07	F	0.92	E	-0.15
16	Mindanao Way □ Marina Expressway EB	AM	1.18	F	0.82	D	-0.36
		PM	1.33	F	0.90	E	-0.43
17	Mindanao Way □ Marina Expressway WB	AM	0.81	D	0.47	A	-0.34
		PM	1.07	F	0.68	B	-0.40
18	Culver Boulevard □ Jefferson Boulevard	AM	1.34	F	0.89	D	-0.45
		PM	1.48	F	0.95	E	-0.53
19	Lincoln Boulevard □ Jefferson Boulevard	AM	1.37	F	0.61	B	-0.76
		PM	1.46	F	0.78	C	-0.68
20	Palawan Way □ Washington Boulevard [1]	AM	n□a	-	0.90	D	-
		PM	n□a	-	0.98	E	-

[1] Unsignalized intersection - stop-controlled on minor approach(es).
[2] Source: *Marina del Rey Traffic Study,* DKS Associates, January 1991
and *Marina del Rey Traffic Study Addendum-Final Report,* DKS Associates, May 1994

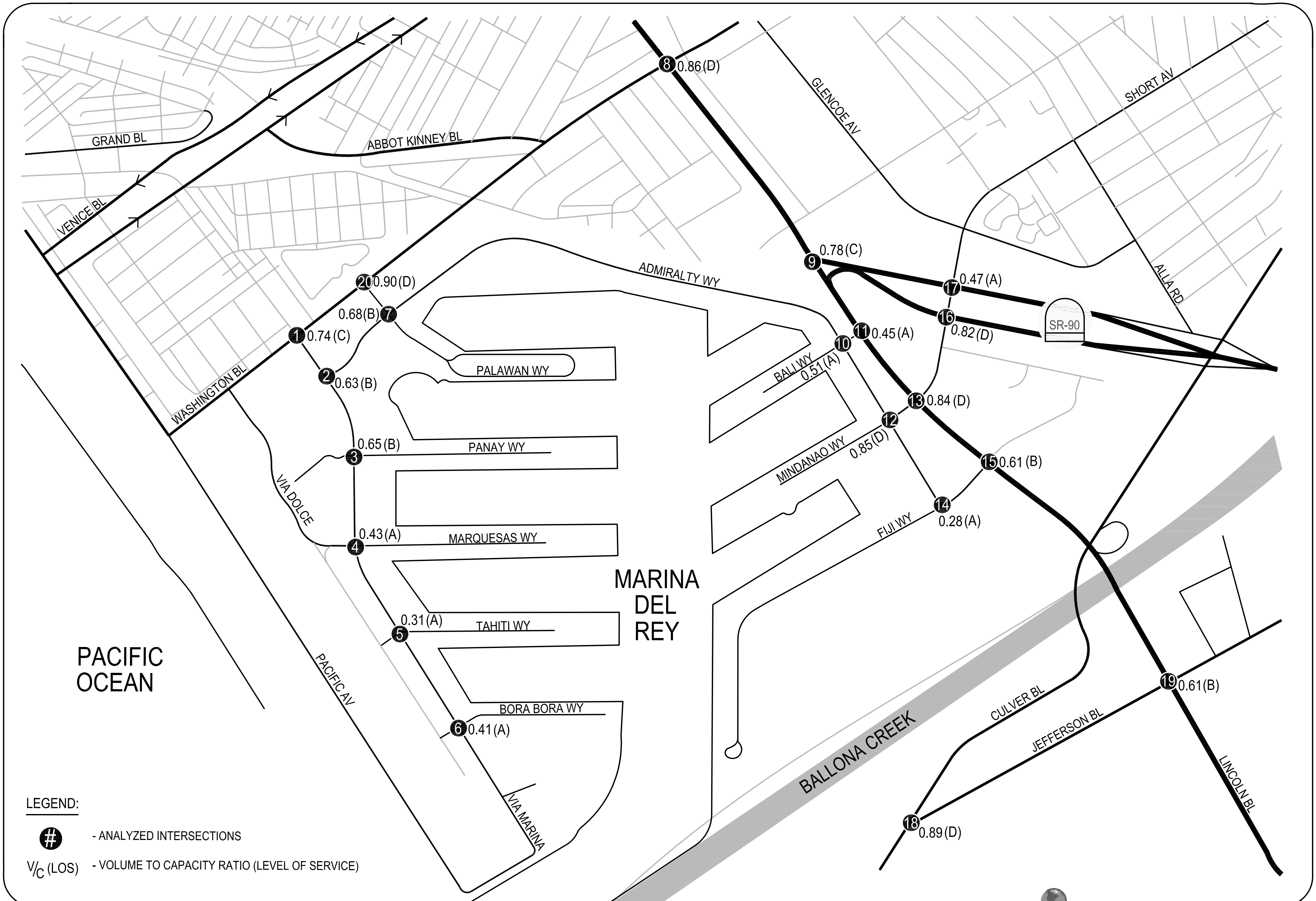


FIGURE 11
FUTURE AMBIENT (2020) PLUS PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS)
AM PEAK HOUR LEVELS OF SERVICE

RAJU Associates, Inc.

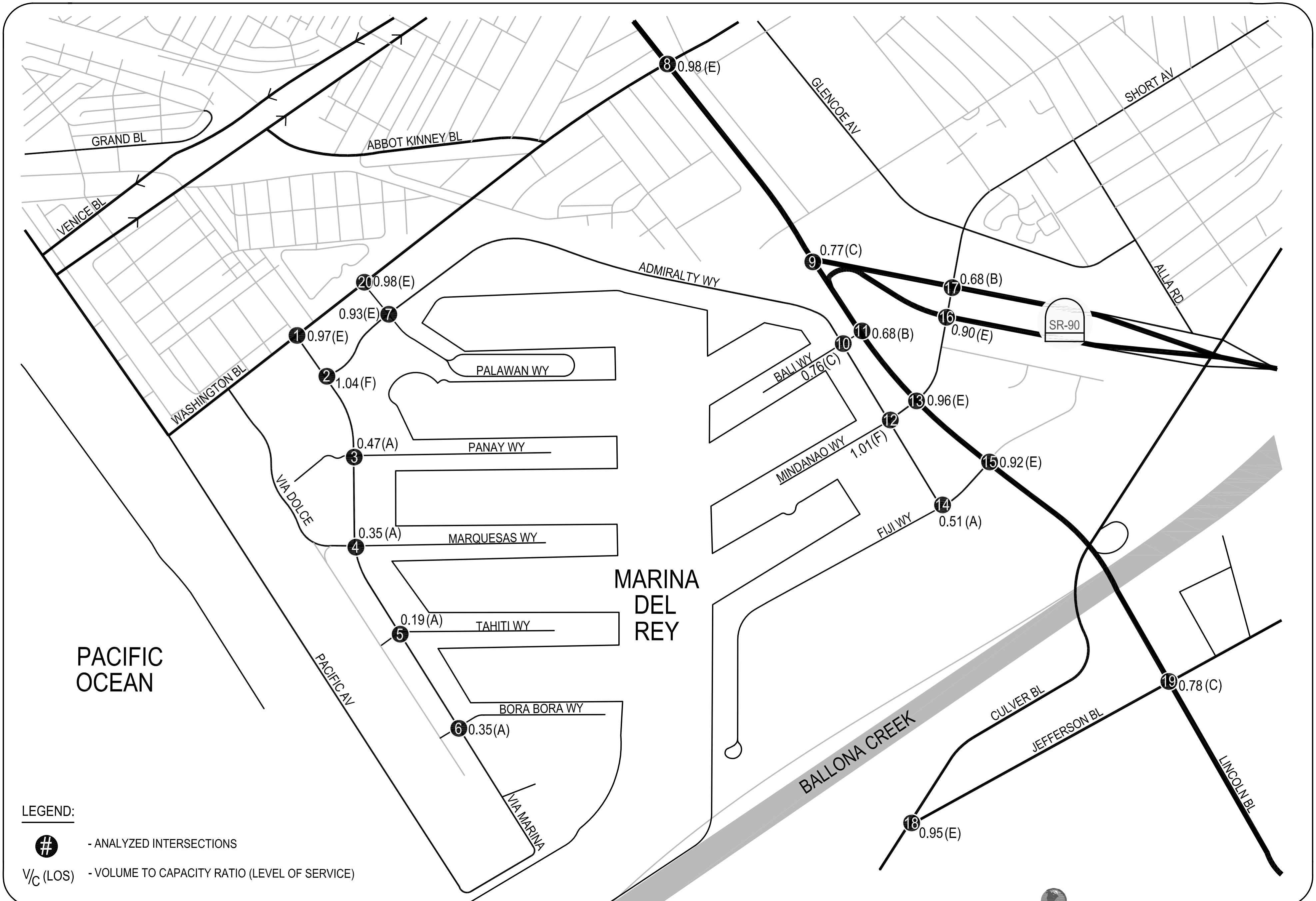


FIGURE 12
FUTURE AMBIENT (2020) PLUS PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS)
PM PEAK HOUR LEVELS OF SERVICE

RAJU Associates, Inc.

COMPARISON TO AMBIENT WITH APPROVED LCP PROJECT CONDITIONS IN THE 1991/94 DKS STUDY

Table 9 also compares the Future Ambient (2020) with Proposed LCP Buildout conditions to the Future Ambient (2010) with the Approved LCP Project conditions from the 1991–1994 DKS Study. As indicated in the table, all of the analyzed intersections under Future Ambient (2020) with Proposed LCP Buildout conditions are projected to operate at better V/C ratios and levels of service than the Future Ambient (2010) with LCP conditions. These scenarios do not include any transportation improvement measures.

A discussion of the transportation improvement measures and ensuing traffic conditions is provided in Chapter VI.

V. FUTURE CUMULATIVE TRAFFIC CONDITIONS

This chapter provides details of the development of travel forecasts for future (2020) cumulative conditions, cumulative with pipeline projects conditions and cumulative with proposed LCP buildout conditions and assessments of these forecasts. Appropriate comparisons to corresponding analyses in the 1991–94 DKS Study where available are also presented in this chapter.

The estimates for cumulative (2020) conditions without the Proposed Project were first developed using the future ambient (2020) forecasts and the traffic associated with the related projects in the vicinity of the project study area. These Cumulative (2020) traffic estimates have been analyzed and compared to the Cumulative (2010) Conditions presented in the 1991–94 DKS Study and results of this assessment have been presented in this chapter.

Traffic forecasts of Cumulative (2020) Conditions with the Proposed Pipeline Projects and with the Proposed LCP Buildout Conditions (including Pipeline Projects) have been developed in this chapter and capacity analyses of these forecasts have been conducted in this chapter. Comparative evaluations of these traffic conditions with the Cumulative (2010) Conditions presented in the 1991–94 DKS Study have also been conducted and the results of the same are presented in this chapter.

Descriptions of each of these analyses elements follow:

CUMULATIVE (2020) TRAFFIC CONDITIONS

The assessment of Cumulative (2020) traffic conditions involved the following three tasks:

- Cumulative (2020) traffic projections
- Analysis of Cumulative (2020) traffic conditions
- Comparison of Cumulative (2020) conditions with the Cumulative (2010) conditions presented in the 1991–1994 DKS Study

A brief discussion of each of the above tasks follows:

Cumulative (2020) Traffic Projections

The future cumulative (2020) traffic consists of traffic growth due to two primary sources: background ambient traffic growth and growth due to related projects within and in the vicinity of the Project study area. The ambient growth was estimated as described in Chapter 3. The related projects growth was estimated using the following methodology:

- Development projects that are planned and expected to be in place within the same timeframe as the Proposed Project and located within and in the vicinity of the Proposed Project study area were identified.
- Data describing related projects in the area was solicited from the County of Los Angeles, City of Los Angeles and City of Culver City. This list was compiled and reviewed by Los Angeles County Department of Beaches and Harbors staff and was finalized through coordination. The summary of related projects included in this study is included in Appendix H. The locations of these projects are also shown in an Exhibit H-1 attached in Appendix H.
- The trip generation estimates for the related projects were developed using trip generation rates contained in the ITE, Trip Generation Informational Report, 8th Edition, the City of Los Angeles Coastal Transportation Corridor Specific Plan (CTCSP) rates and West Los Angeles Transportation Improvement and Mitigation Specific Plan rates.
- These related project trips were assigned to the roadway network to obtain related projects only traffic volumes. The related projects only traffic volume forecasts at each of the analysis intersections within the study area are provided in Exhibit H-2 in Appendix H of this report.

The related projects' traffic estimates shown in Appendix H Exhibit H-2 were added to the Future Ambient (2020) traffic volumes in Appendix D to obtain the Cumulative (2020) traffic volumes. The Cumulative (2020) traffic volumes at each of the analysis intersections during the peak hours are also attached in Appendix I. These volumes represent Cumulative (2020) conditions.

Cumulative (2020) Traffic Conditions Analysis

The Cumulative (2020) peak hour traffic volumes were analyzed to determine the volume to capacity (V/C) ratio and LOS at each of the analyzed intersections. The results of this analysis are summarized in Table 10 and presented in Figures 13 and 14, for AM and PM peak hours, respectively. As indicated in the table, 18 of the 20 analyzed intersections in the morning peak hour and 17 of the 20 intersections in the evening peak hour are projected to operate at LOS D or better. The remaining intersections are projected to operate at LOS E or F. They include the following:

<u>AM Peak Hour</u>

- Lincoln Boulevard/Washington Boulevard – LOS E
- Culver Boulevard/Jefferson Boulevard – LOS E

<u>PM Peak Hour</u>

- Lincoln Boulevard/Washington Boulevard – LOS E
- Lincoln Boulevard/Mindanao Way – LOS E
- Culver Boulevard/Jefferson Boulevard – LOS F

COMPARISON TO CUMULATIVE CONDITIONS (WITH NO MARINA DEVELOPMENT) IN THE 1991/1994 DKS STUDY

Table 10 also compares the Cumulative (2020) conditions to the Cumulative (2010) conditions (with no Marina Development) from the 1991/1994 DKS Study. As indicated in the table, all of the analyzed intersections under Cumulative (2020) conditions are projected to operate at better V/C ratios and levels of service than the Cumulative (2010) conditions described in the 1991/1994 DKS Study.

Capacity calculation worksheets for Cumulative (2020) conditions are attached in Appendix I of the report.

TABLE 10
SUMMARY OF LEVEL OF SERVICE ANALYSIS - FUTURE CUMULATIVE CONDITIONS

			1991/1994 Approved Study [2] Cumulative (2010) Conditions		2009 Study Cumulative (2020) Conditions		Difference in
Map □	**INTERSECTION**	**Peak Hour**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**
1	Via Marina □ Washington Boulevard	AM	1.06	F	0.60	A	-0.46
		PM	1.68	F	0.80	C	-0.89
2	Via Marina □ Admiralty Way	AM	0.79	C	0.51	A	-0.28
		PM	1.27	F	0.86	D	-0.41
3	Via Marina □ Panay Way	AM	0.74	C	0.41	A	-0.33
		PM	0.72	C	0.32	A	-0.40
4	Via Marina □ Marquesas Way	AM	0.46	A	0.28	A	-0.19
		PM	0.58	A	0.24	A	-0.35
5	Via Marina □ Tahiti Way	AM	0.53	A	0.28	A	-0.25
		PM	0.55	A	0.18	A	-0.37
6	Via Marina □ Bora Bora Way [1]	AM	0.44	A	0.37	A	-0.07
		PM	0.45	A	0.34	A	-0.11
7	Palawan Way □ Admiralty Way	AM	0.93	E	0.44	A	-0.49
		PM	1.38	F	0.75	C	-0.63
8	Lincoln Boulevard □ Washington Boulevard	AM	1.94	F	0.91	E	-1.03
		PM	2.40	F	0.98	E	-1.42
9	Lincoln Boulevard □ Marina Expressway	AM	1.77	F	0.87	D	-0.90
		PM	2.04	F	0.85	D	-1.19
10	Admiralty Way □ Bali Way	AM	0.84	D	0.38	A	-0.46
		PM	1.32	F	0.57	A	-0.75
11	Lincoln Boulevard □ Bali Way	AM	1.08	F	0.50	A	-0.58
		PM	1.49	F	0.65	B	-0.84

TABLE 10 (continued)
SUMMARY OF LEVEL OF SERVICE ANALYSIS - FUTURE CUMULATIVE CONDITIONS

			1991/1994 Approved Study [2] Cumulative (2010) Conditions		2009 Study Cumulative (2020) Conditions		Difference in
Map □	INTERSECTION	Peak Hour	V/C	LOS	V/C	LOS	V/C
12	Admiralty Way □ Mindanao Way	AM	1.00	E	0.53	A	-0.47
		PM	1.26	F	0.75	C	-0.51
13	Lincoln Boulevard □ Mindanao Way	AM	1.51	F	0.76	C	-0.75
		PM	1.73	F	0.93	E	-0.80
14	Admiralty Way □ Fiji Way	AM	0.86	D	0.24	A	-0.62
		PM	1.20	F	0.41	A	-0.79
15	Lincoln Boulevard □ Fiji Way	AM	1.39	F	0.64	B	-0.75
		PM	1.62	F	0.88	D	-0.74
16	Mindanao Way □ Marina Expressway EB	AM	1.26	F	0.74	C	-0.52
		PM	1.56	F	0.86	D	-0.70
17	Mindanao Way □ Marina Expressway WB	AM	0.94	E	0.44	A	-0.50
		PM	1.33	F	0.63	B	-0.70
18	Culver Boulevard □ Jefferson Boulevard	AM	1.62	F	0.94	E	-0.69
		PM	1.88	F	1.06	F	-0.82
19	Lincoln Boulevard □ Jefferson Boulevard	AM	1.88	F	0.78	C	-1.10
		PM	2.30	F	0.90	D	-1.40
20	Palawan Way □ Washington Boulevard [1]	AM	n□a	-	0.75	C	-
		PM	n□a	-	0.79	C	-

[1] Unsignalized intersections - stop-controlled on minor approach(es).
[2] Source: *Marina del Rey Traffic Study,* DKS Associates, January 1991
and *Marina del Rey Traffic Study Addendum-Final Report,* DKS Associates, May 1994

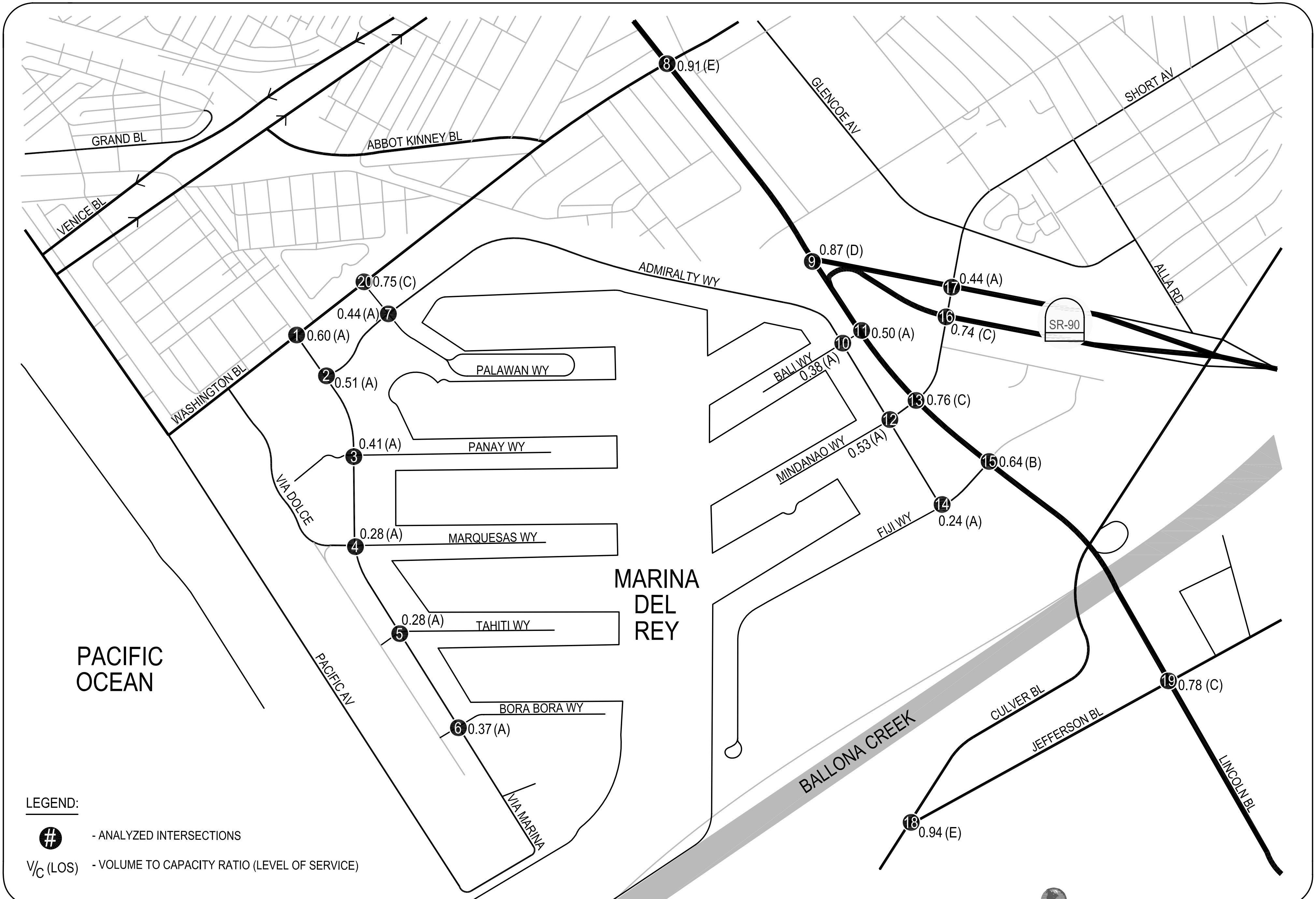


FIGURE 13
CUMULATIVE (2020) LEVELS OF SERVICE - AM PEAK HOUR

RAJU Associates, Inc.

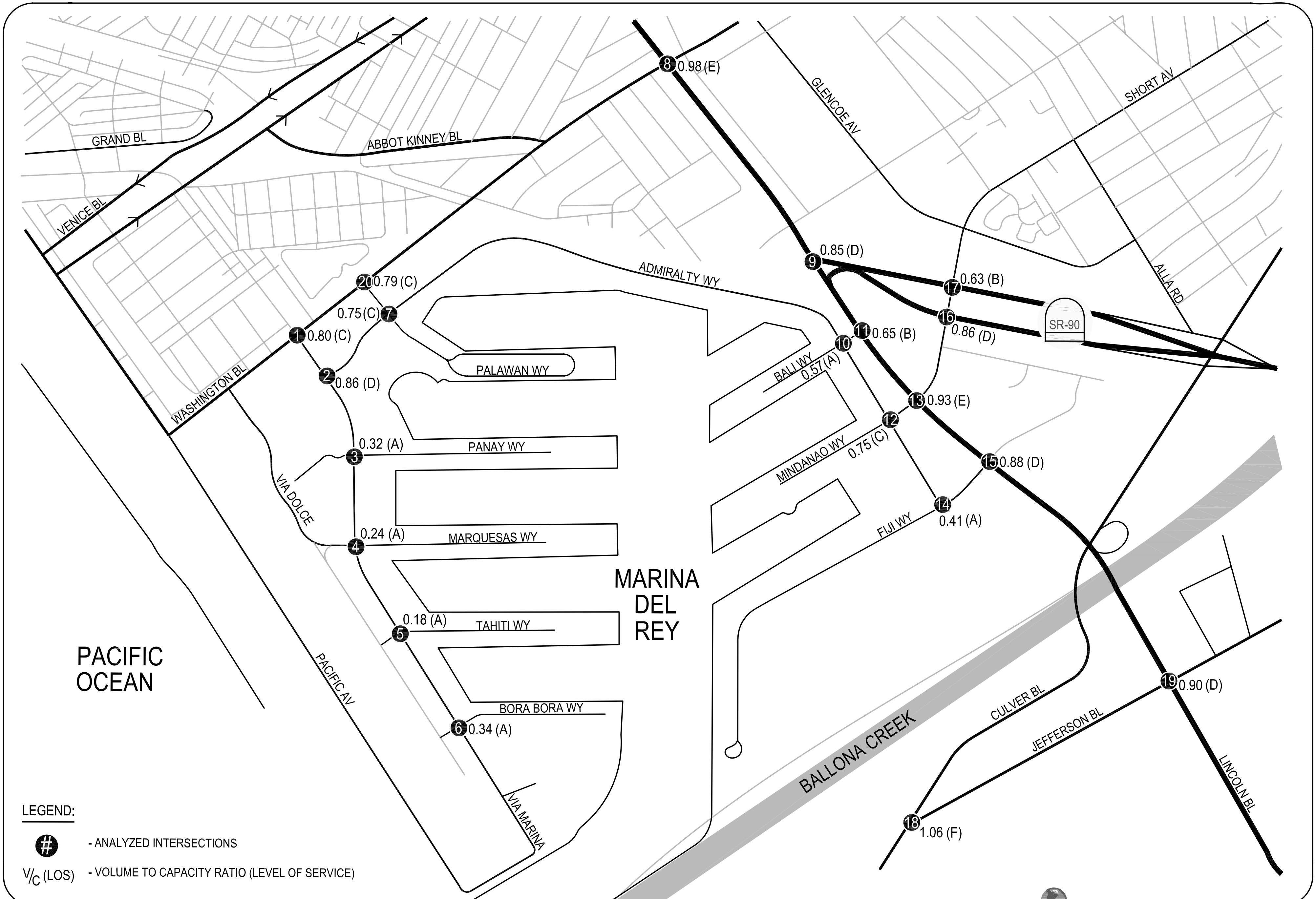


FIGURE 14
CUMULATIVE (2020) LEVELS OF SERVICE - PM PEAK HOUR

RAJU Associates, Inc.

CUMULATIVE (2020) WITH PIPELINE PROJECTS TRAFFIC CONDITIONS

The Cumulative (2020) with Pipeline Projects traffic forecasts were first developed by adding the Pipeline Projects only traffic volumes to the Cumulative (2020) traffic forecasts developed as described in the previous section. The Cumulative (2020) with LCP Amendment Project (Pipeline Projects) traffic volumes are attached in Appendix J.

These peak hour traffic volumes were analyzed to determine the volume to capacity (V/C) ratio and LOS at each of the analyzed intersections. The results of this analysis are summarized on Table 11. These results are also presented in Figures 15 and 16 for AM and PM peak hours, respectively. From the table, it can be observed that 18 of the 20 analyzed intersections in the morning peak hour and 13 of the 20 intersections in the evening peak hour are projected to operate at LOS D or better. The remaining intersections are projected to operate at LOS E or F. The locations that are operating at LOS E or F include the following:

<u>AM Peak Hour</u>

- Lincoln Boulevard/Washington Boulevard - LOS E
- Culver Boulevard/Jefferson Boulevard- LOS E

<u>PM Peak Hour</u>

- Via Marina/Admiralty Way – LOS E
- Lincoln Boulevard/Washington Boulevard - LOS F
- Admiralty Way/Mindanao Way – LOS E
- Lincoln Boulevard/Mindanao Way – LOS F
- Lincoln Boulevard/Fiji Way – LOS E
- Lincoln Boulevard/Jefferson Boulevard – LOS E
- Culver Boulevard/Jefferson Boulevard- LOS F

Capacity calculation worksheets for Cumulative (2020) with Pipeline Projects conditions are attached in Appendix J of the report.

TABLE 11
SUMMARY OF LEVEL OF SERVICE ANALYSIS - FUTURE CUMULATIVE CONDITIONS WITH LCP AMENDMENT (PIPELINE PROJECTS)

			1991/1994 Approved Study [2] Cumulative (2010) Conditions		2009 Study Cumulative (2020) with LCP Amendment (Pipeline Projects)		Difference in
Map □	INTERSECTION	Peak Hour	V/C	LOS	V/C	LOS	V/C
1	Via Marina □ Washington Boulevard	AM	1.06	F	0.64	B	-0.42
		PM	1.68	F	0.86	D	-0.82
2	Via Marina □ Admiralty Way	AM	0.79	C	0.57	A	-0.23
		PM	1.27	F	0.94	E	-0.33
3	Via Marina □ Panay Way	AM	0.74	C	0.45	A	-0.29
		PM	0.72	C	0.34	A	-0.38
4	Via Marina □ Marquesas Way	AM	0.46	A	0.39	A	-0.07
		PM	0.58	A	0.29	A	-0.29
5	Via Marina □ Tahiti Way	AM	0.53	A	0.28	A	-0.25
		PM	0.55	A	0.19	A	-0.37
6	Via Marina □ Bora Bora Way [1]	AM	0.44	A	0.37	A	-0.07
		PM	0.45	A	0.34	A	-0.11
7	Palawan Way □ Admiralty Way	AM	0.93	E	0.56	A	-0.37
		PM	1.38	F	0.86	D	-0.52
8	Lincoln Boulevard □ Washington Boulevard	AM	1.94	F	0.94	E	-1.00
		PM	2.40	F	1.03	F	-1.37
9	Lincoln Boulevard □ Marina Expressway	AM	1.77	F	0.88	D	-0.89
		PM	2.04	F	0.88	D	-1.16
10	Admiralty Way □ Bali Way	AM	0.84	D	0.43	A	-0.41
		PM	1.32	F	0.66	B	-0.66
11	Lincoln Boulevard □ Bali Way	AM	1.08	F	0.52	A	-0.56
		PM	1.49	F	0.70	B	-0.79

TABLE 11 (continued)
SUMMARY OF LEVEL OF SERVICE ANALYSIS - FUTURE CUMULATIVE CONDITIONS WITH LCP AMENDMENT (PIPELINE PROJECTS)

Map □	INTERSECTION	Peak Hour	1991/1994 Approved Study [2] Cumulative (2010) Conditions V/C	LOS	2009 Study Cumulative (2020) with LCP Amendment (Pipeline Projects) V/C	LOS	Difference in V/C
12	Admiralty Way □ Mindanao Way	AM	1.00	E	0.70	B	-0.30
		PM	1.26	F	0.92	E	-0.34
13	Lincoln Boulevard □ Mindanao Way	AM	1.51	F	0.83	D	-0.68
		PM	1.73	F	1.00	F	-0.73
14	Admiralty Way □ Fiji Way	AM	0.86	D	0.28	A	-0.58
		PM	1.20	F	0.47	A	-0.74
15	Lincoln Boulevard □ Fiji Way	AM	1.39	F	0.68	B	-0.71
		PM	1.62	F	0.97	E	-0.66
16	Mindanao Way □ Marina Expressway EB	AM	1.26	F	0.82	D	-0.44
		PM	1.56	F	0.90	D	-0.66
17	Mindanao Way □ Marina Expressway WB	AM	0.94	E	0.46	A	-0.48
		PM	1.33	F	0.68	B	-0.65
18	Culver Boulevard □ Jefferson Boulevard	AM	1.62	F	0.94	E	-0.68
		PM	1.88	F	1.06	F	-0.82
19	Lincoln Boulevard □ Jefferson Boulevard	AM	1.88	F	0.78	C	-1.10
		PM	2.30	F	0.91	E	-1.40
20	Palawan Way □ Washington Boulevard [1]	AM	n□a	-	0.80	D	-
		PM	n□a	-	0.90	D	-

[1] Unsignalized intersections - stop-controlled on minor approach(es).
[2] Source: *Marina del Rey Traffic Study,* DKS Associates, January 1991
and *Marina del Rey Traffic Study Addendum-Final Report,* DKS Associates, May 1994

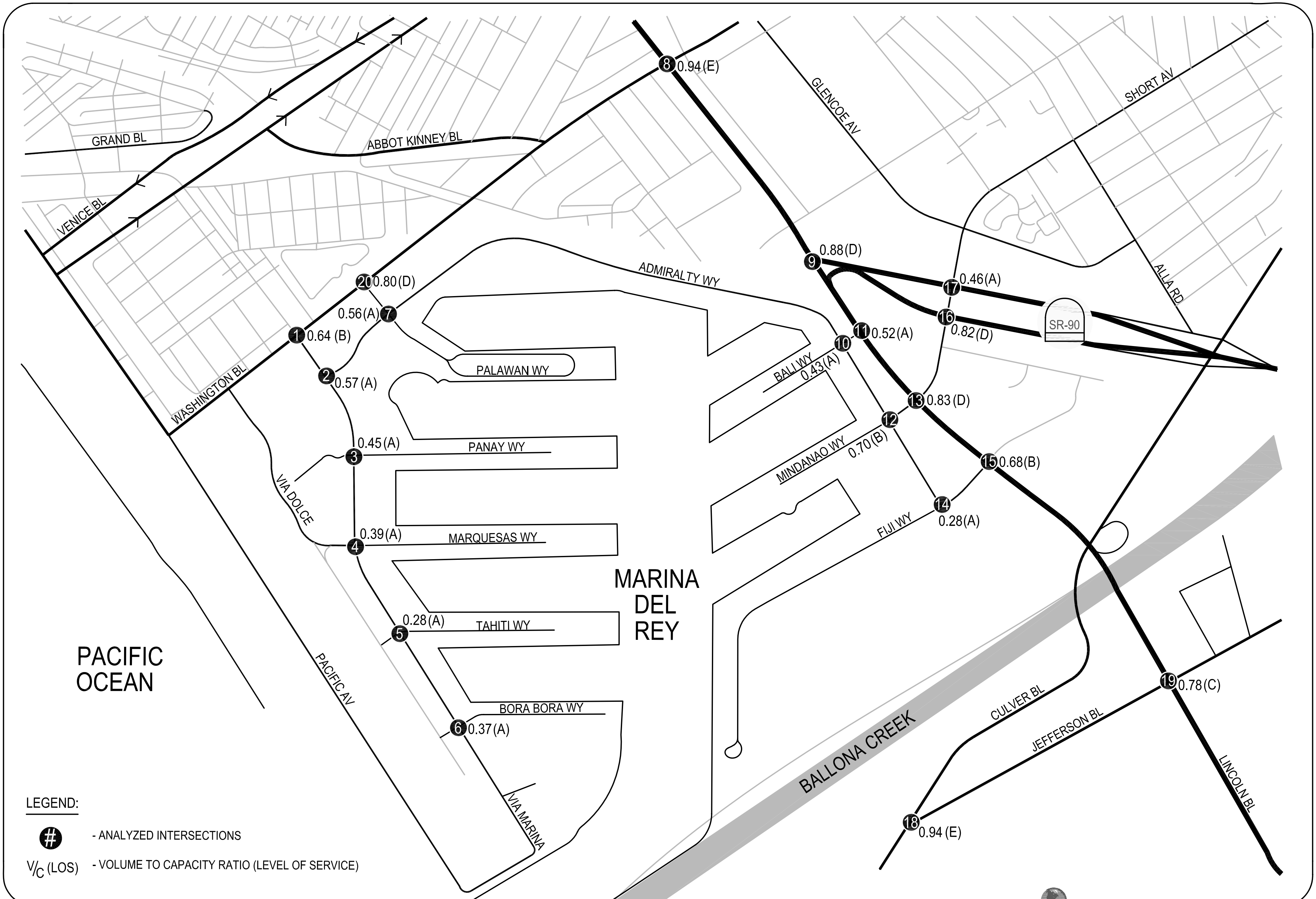


FIGURE 15
CUMULATIVE (2020) WITH PIPELINE PROJECTS AM PEAK HOUR LEVELS OF SERVICE

RAJU Associates, Inc.

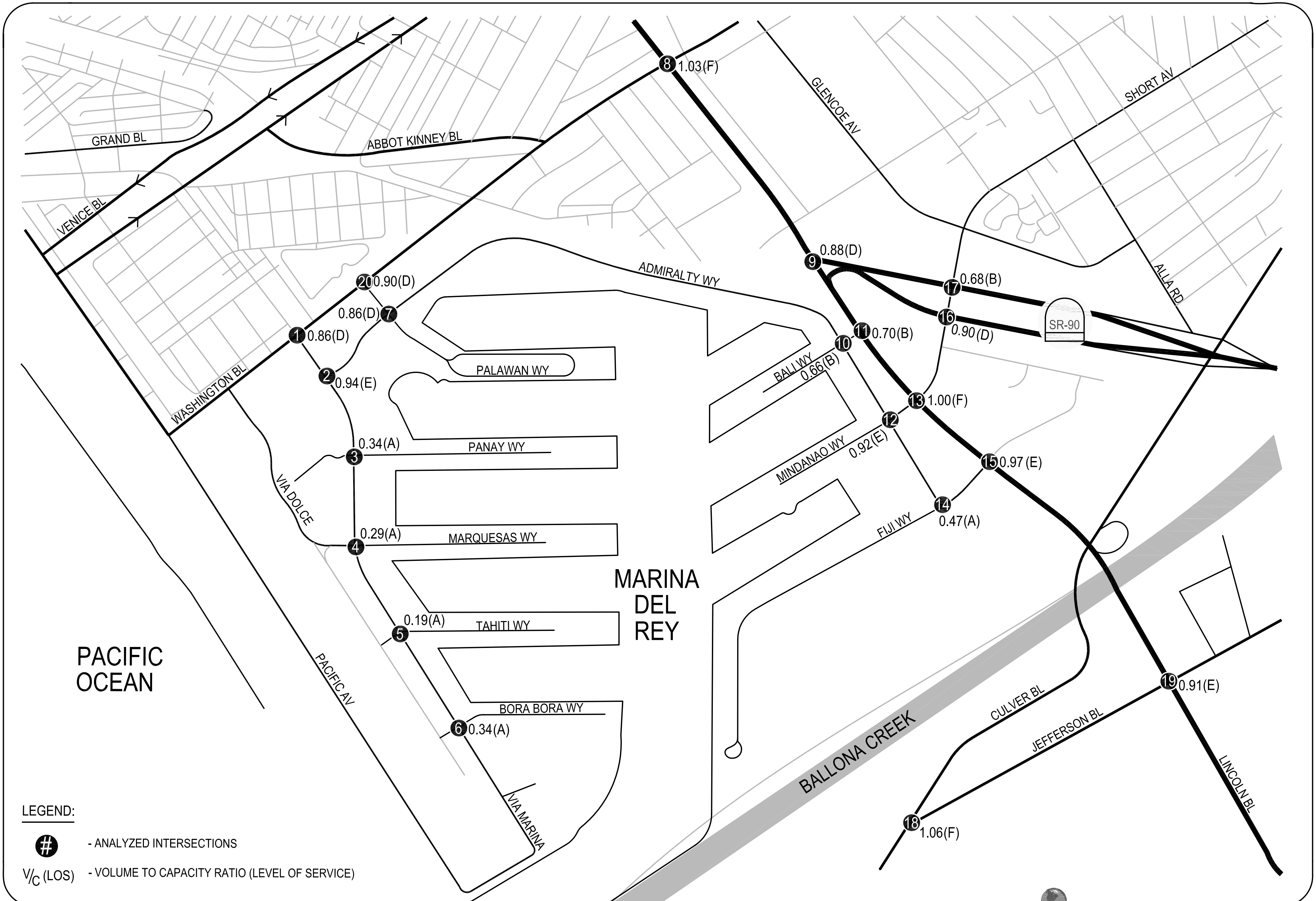


FIGURE 16
CUMULATIVE (2020) WITH PIPELINE PROJECTS PM PEAK HOUR LEVELS OF SERVICE

RAJU Associates, Inc.

COMPARISON TO CUMULATIVE CONDITIONS (WITH NO MARINA DEVELOPMENT) IN THE 1991/94 DKS STUDY

Table 11 also compares the Cumulative (2020) with LCP Amendment Pipeline Projects conditions to the Cumulative (2010) conditions (with no Marina Development) described in the approved 1991/1994 DKS Study. It can be observed from this comparison that all of the analyzed intersections under Cumulative (2020) with LCP Amendment Pipeline Projects conditions are projected to operate at better V/C ratios and levels of service than the Cumulative (2010) conditions (with no Marina Development) from the approved 1991/1994 DKS Study.

CUMULATIVE (2020) WITH PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS) TRAFFIC CONDITIONS

The Cumulative (2020) with Proposed LCP Buildout (including Pipeline Projects) traffic forecasts were first developed by adding the Proposed LCP Buildout only traffic volumes to the Cumulative (2020) traffic forecasts developed as described in the previous section. The Cumulative (2020) with Proposed LCP Buildout (including Pipeline Projects) traffic volumes are attached in Appendix K.

These peak hour traffic volumes were analyzed to determine the volume to capacity (V/C) ratio and LOS at each of the analyzed intersections. The results of this analysis are summarized on Table 12. These results are also presented in Figures 17 and 18 for AM and PM peak hours, respectively. From the tables, it can be observed that 14 of the 20 analyzed intersections in the morning peak hour and 8 of the 20 intersections in the evening peak hour are projected to operate at LOS D or better. The remaining intersections are projected to operate at LOS E or F. The locations that are operating at LOS E or F include the following:

<u>AM Peak Hour</u>

- Lincoln Boulevard/Washington Boulevard - LOS E
- Lincoln Boulevard/Marina Expressway – LOS E
- Lincoln Boulevard/Mindanao Way – LOS E
- Mindanao Way/Marina Expressway EB - LOSE
- Culver Boulevard/Jefferson Boulevard- LOS E
- Washington Boulevard/Palawan Way – LOS E

TABLE 12
SUMMARY OF LEVEL OF SERVICE ANALYSIS - FUTURE CUMULATIVE CONDITIONS WITH PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS)

Map □	INTERSECTION	Peak Hour	1991/1994 Approved Study [2] Cumulative (2010) Conditions V/C	LOS	2009 Study Cumulative (2020) w/Proposed LCP Buildout (incl. Pipeline Projects) V/C	LOS	Difference in V/C
1	Via Marina □ Washington Boulevard	AM	1.06	F	0.77	C	-0.29
		PM	1.68	F	0.99	E	-0.69
2	Via Marina □ Admiralty Way	AM	0.79	C	0.66	B	-0.13
		PM	1.27	F	1.07	F	-0.20
3	Via Marina □ Panay Way	AM	0.74	C	0.66	B	-0.08
		PM	0.72	C	0.48	A	-0.24
4	Via Marina □ Marquesas Way	AM	0.46	A	0.44	A	-0.02
		PM	0.58	A	0.36	A	-0.22
5	Via Marina □ Tahiti Way	AM	0.53	A	0.32	A	-0.21
		PM	0.55	A	0.20	A	-0.35
6	Via Marina □ Bora Bora Way [1]	AM	0.44	A	0.42	A	-0.02
		PM	0.45	A	0.36	A	-0.09
7	Palawan Way □ Admiralty Way	AM	0.93	E	0.71	C	-0.22
		PM	1.38	F	0.97	E	-0.41
8	Lincoln Boulevard □ Washington Boulevard	AM	1.94	F	0.98	E	-0.96
		PM	2.40	F	1.13	F	-1.27
9	Lincoln Boulevard □ Marina Expressway	AM	1.77	F	0.91	E	-0.86
		PM	2.04	F	0.93	E	-1.11
10	Admiralty Way □ Bali Way	AM	0.84	D	0.54	A	-0.30
		PM	1.32	F	0.79	C	-0.53
11	Lincoln Boulevard □ Bali Way	AM	1.08	F	0.55	A	-0.53
		PM	1.49	F	0.77	C	-0.72

TABLE 12 (continued)
SUMMARY OF LEVEL OF SERVICE ANALYSIS - FUTURE CUMULATIVE CONDITIONS WITH PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS)

			1991/1994 Approved Study [2] Cumulative (2010) Conditions		2009 Study Cumulative (2020) w/Proposed LCP Buildout (incl. Pipeline Projects)		Difference in
Map □	**INTERSECTION**	**Peak Hour**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**
12	Admiralty Way □ Mindanao Way	AM	1.00	E	0.88	D	-0.12
		PM	1.26	F	1.06	F	-0.21
13	Lincoln Boulevard □ Mindanao Way	AM	1.51	F	0.92	E	-0.59
		PM	1.73	F	1.08	F	-0.65
14	Admiralty Way □ Fiji Way	AM	0.86	D	0.31	A	-0.56
		PM	1.20	F	0.54	A	-0.67
15	Lincoln Boulevard □ Fiji Way	AM	1.39	F	0.71	C	-0.68
		PM	1.62	F	1.03	F	-0.59
16	Mindanao Way □ Marina Expressway EB	AM	1.26	F	0.92	E	-0.35
		PM	1.56	F	0.95	E	-0.61
17	Mindanao Way □ Marina Expressway WB	AM	0.94	E	0.50	A	-0.44
		PM	1.33	F	0.74	C	-0.59
18	Culver Boulevard □ Jefferson Boulevard	AM	1.62	F	0.94	E	-0.68
		PM	1.88	F	1.06	F	-0.82
19	Lincoln Boulevard □ Jefferson Boulevard	AM	1.88	F	0.79	C	-1.09
		PM	2.30	F	0.91	E	-1.39
20	Palawan Way □ Washington Boulevard [1]	AM	n□a	-	0.92	E	-
		PM	n□a	-	1.00	F	-

[1] Unsignalized intersections - stop-controlled on minor approach(es).
[2] Source: *Marina del Rey Traffic Study,* DKS Associates, January 1991
and *Marina del Rey Traffic Study Addendum-Final Report,* DKS Associates, May 1994

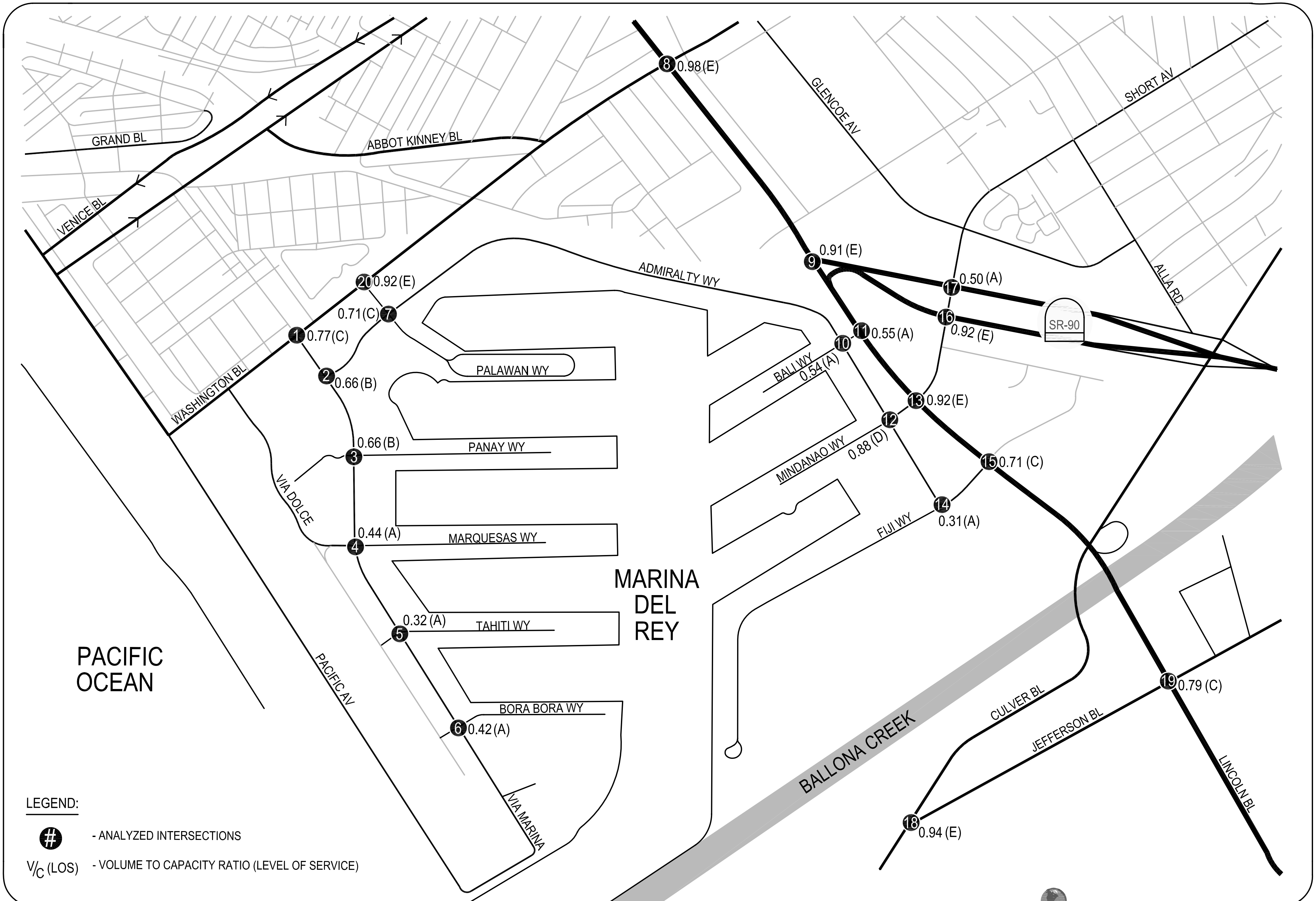


FIGURE 17
CUMULATIVE (2020) PLUS PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS)
AM PEAK HOUR LEVELS OF SERVICE

RAJU Associates, Inc.

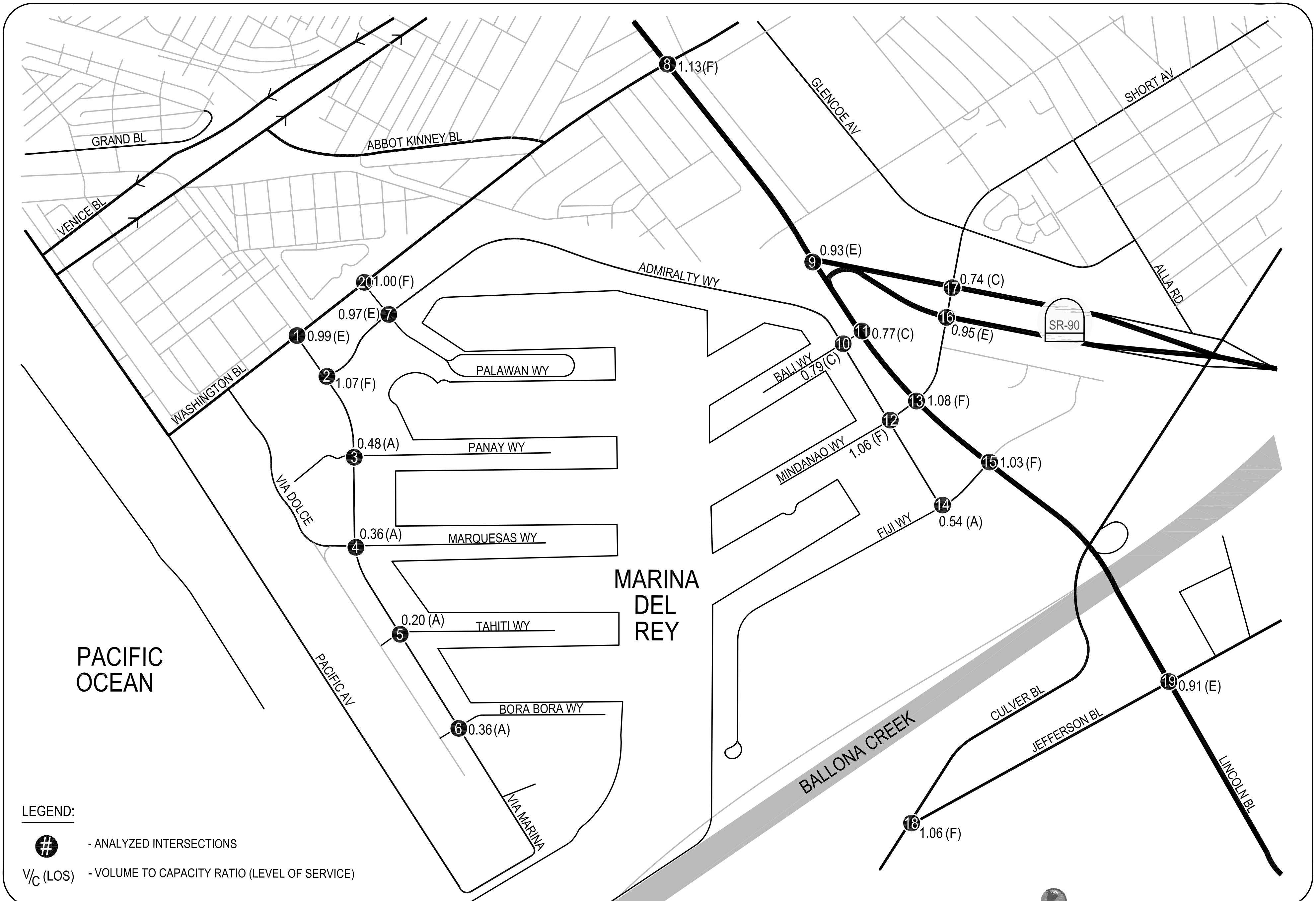


FIGURE 18
CUMULATIVE (2020) PLUS PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS)
PM PEAK HOUR LEVELS OF SERVICE

RAJU Associates, Inc.

PM Peak Hour

- Via Marina/Admiralty Way – LOS E
- Via Marina/Admiralty Way – LOS F
- Palawan Way/Admiralty Way – LOS E
- Lincoln Boulevard/Washington Boulevard - LOS F
- Lincoln Boulevard/Marina Expressway – LOS E
- Admiralty Way/Mindanao Way – LOS F
- Lincoln Boulevard/Mindanao Way – LOS F
- Lincoln Boulevard/Fiji Way – LOS F
- Mindanao Way/Marina Expressway EB – LOS E
- Lincoln Boulevard/Jefferson Boulevard – LOS E
- Culver Boulevard/Jefferson Boulevard – LOS F
- Palawan Way/Washington Boulevard – LOS F

Capacity calculation worksheets for Cumulative (2020) with Proposed LCP Buildout (including Pipeline Projects) conditions are attached in Appendix K of the report.

COMPARISON TO CUMULATIVE (2010) CONDITIONS (WITH NO MARINA DEVELOPMENT) IN THE 1991/94 DKS STUDY

Table 12 also compares the Cumulative (2020) with Proposed LCP Buildout conditions to the Cumulative (2010) conditions (with no Marina Development) from the 1991–1994 DKS Study. As indicated in the table, all of the analyzed intersections under Cumulative (2020) with Proposed LCP Buildout conditions are projected to operate at better V/C ratios and levels of service than the Cumulative (2010) conditions (with no Marina Development) in the 1991/94 DKS Study. These scenarios do not include any transportation improvement measures.

A discussion of the transportation improvement measures and ensuing traffic conditions is provided in the next chapter.

VI. ASSESSMENT OF TRANSPORTATION IMPROVEMENT MEASURES

The Proposed Project (LCP Amendment) includes changes to the transportation improvement measures that were previously approved as part of the Local Coastal Program. These changes are being advanced in reaction to the changes due to proposed pipeline projects as well as the prevailing and projected future traffic conditions in the region. This chapter addresses the traffic conditions including the effects due to these changes and compares the same to projected traffic conditions with the approved LCP and its mitigation measures in the 1991–1994 DKS Study.

The approved LCP included a Transportation Improvement Program. A detailed description of this improvement program (from *Appendix G of the Local Implementation Program*) is attached in Appendix L-1. The Transportation Improvement Program included three Categories of circulation system improvements – Category 1 improvements consisted of potential internal Marina del Rey improvements; Category 2 improvements were reserved for Area A; and Category 3 improvements consisted of improvements that could be employed to mitigate the cumulative impacts of development in the LCP study area on the regional transportation system serving Marina Del Rey and adjacent areas.

Several updates and changes to this improvement program are being advanced as part of this proposed LCP Amendment. As part of the LCP Amendment, two sets of improvements are being proposed. They include the Revised Set of Intersection Improvement Projects and improvements to regional transportation system.

The Revised Set of Intersection Improvement Projects are described in detail in the following section. The improvements to the regional transportation system would include elements such as intersection improvements at Washington Boulevard/Palawan Way and Lincoln Boulevard/SR 90 Expressway Extension, SR 90 Expressway Extension to Admiralty Way, transit system improvements including regional transit and shuttle system improvements, transportation system management and transportation demand management program improvements. All these potential improvements can only go forward with the agreement of all the agencies including the City of Los Angeles and Caltrans.

LCP AMENDMENT TRANSPORTATION IMPROVEMENTS

The Revised Set of Intersection Improvement Projects being advanced as part of this LCP Amendment (Proposed Project) include the following:

1. Via Marina/Admiralty Way Intersection Improvement Alternatives

   a. Alternative A - The improvement at this intersection includes a third westbound left-turn lane and a second southbound left-turn lane. The westbound approach would provide three left-turn lanes and two right-turn lanes. The southbound approach would provide dual left-turn lanes and two through lanes.
   b. Alternative B - Realign this intersection to make Admiralty Way and Via Marina Way roadway segment south of Admiralty to become east-west roadways and make Via Marina Way north of Admiralty Way to "T" intersect into this roadway. The westbound Admiralty Way roadway would have two through lanes and a right-turn lane. The eastbound re-aligned Via Marina roadway would provide two through lanes and dual left-turn lanes. The re-aligned Via Marina Way southbound approach would provide dual left-turn lanes and a separate right-turn lane

Replace the Admiralty Way 5-Lane Project, recommended as part of the Local Coastal Program, with key intersection improvements (described below) that achieve similar improved operating results.

2. Palawan Way/Admiralty Way Intersection Improvement Alternatives

   a. Alternative A - The southbound approach at this intersection will be restriped to provide a left-turn lane, a shared left-through lane and a separate right-turn lane. The northbound approach would be restriped to provide a shared left-though lane and a shared through-right turn lane. A third through lane would be provided in the westbound direction. The westbound approach would provide a left-turn lane, two through lanes and a shared through-right lane. The north-south signal phasing would operate as a split phase due to the lane configurations.
   b. Alternative B - Provide an additional lane on the southbound approach. The southbound approach would provide dual left-turn lanes, one through lane and a

separate right-turn lane. The northbound approach would be restriped to provide a shared left-though lane and a separate right-turn lane. A third through lane would be provided in the westbound direction. The westbound approach would provide a left-turn lane, two through lanes and a shared through-right lane. The north-south signal phasing would operate as a split phase due to the lane configurations.

3. Admiralty Way/Bali Way - The improvement at this intersection includes a second southbound left-turn lane. The southbound approach would provide dual left-turn lanes, one through lane, and a shared through-right lane.

4. Admiralty Way/Mindanao Way - The improvement at this intersection includes a second southbound left-turn lane and an additional lane on the eastbound approach. The southbound approach would provide dual left-turn lanes, one through lane, and a shared through-right lane. The eastbound approach would provide a left-turn lane, a shared left-through lane and a shared through-right lane. The improvement also includes restriping the westbound approach to provide a left-turn lane, a shared left-through-right lane, and a separate right-turn lane. The east-west signal phase would continue to operate as a split phase due to the lane configurations.

Table 13 provides a description of Intersection Lane Geometry at each of the 20 analyzed intersections for the following three scenarios /conditions:

- Before Improvements
- Proposed LCP Amendment with Improvements
- Approved LCP with Mitigations

As noted above, the LCP Amendment includes the Revised Set of Intersection Improvement Projects within Marina del Rey. With the improvements in place and including improvements at Palawan Way/Washington Boulevard (consisting of provision of a traffic signal and restriping the Palawan Way approach at this intersection), traffic shifts would occur at the study intersections of Via Marina-Ocean Avenue /Washington Boulevard, Via Marina /Admiralty Way and Palawan Way /Admiralty Way. Both scenarios with and without the Washington Boulevard /Palawan Way signalization improvement have been evaluated. The resulting volumes for both scenarios are shown in Appendix M and represent the Future Ambient (2020) with LCP Amendment with Improvements traffic volumes.

FUTURE AMBIENT (2020) WITH LCP AMENDMENT (PIPELINE PROJECTS) AND TRANSPORTATION IMPROVEMENTS TRAFFIC ANALYSIS AND EVALUATION

The Future Ambient (2020) with LCP Amendment with the Revised Set of Intersection Improvement Projects peak hour traffic volumes were analyzed to determine the volume to capacity (V/C) ratio and LOS at each of the analyzed intersections. The results of this analysis are summarized in Table 14. These results are also presented in Figures 19 and 20 for AM and PM peak hours, respectively. As indicated in the table, with the Washington Boulevard /Palawan Way intersection improvement and all the other transportation improvements described in the previous section, all 20 study intersections during the morning peak hour and 19 of the 20 intersections during the evening peak hour are projected to operate at LOS D or better. The remaining intersection (Culver Boulevard /Jefferson Boulevard) is projected to operate at LOS E.

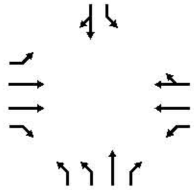
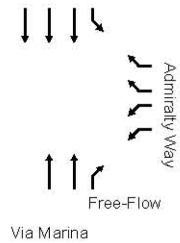
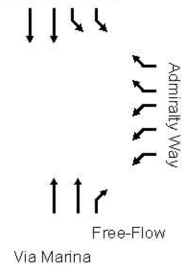
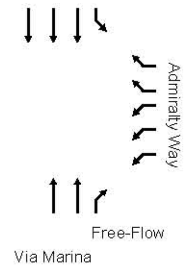
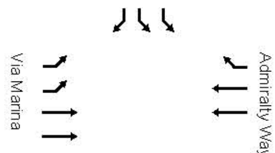
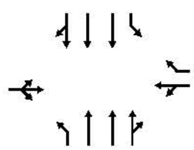
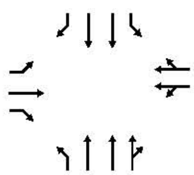
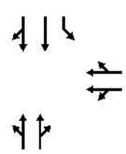
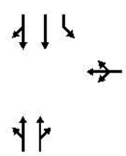
For the scenario without the Washington Boulevard /Palawan Way intersection improvement, it can also be observed from Table 14 that all 20 intersections in the morning peak hour and the same 19 of the 20 intersections in the evening peak hour are projected to operate at level of service (LOS) D or better. The capacity calculation worksheets for Future Ambient (2020) with LCP Amendment with the Revised Set of Intersection Improvement Projects are attached in Appendix M of the report.

COMPARISON TO FUTURE AMBIENT (2010) CONDITIONS IN THE 1991/94 DKS STUDY

Table 14 also compares the Future Ambient (2020) with LCP Amendment with the Revised Set of Intersection Improvement Projects to the Future Ambient (2010) conditions from the 1991/1994 DKS Study.

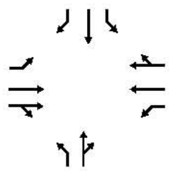
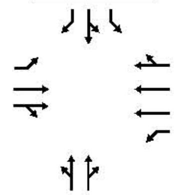
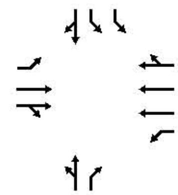
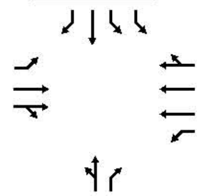
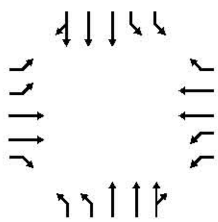
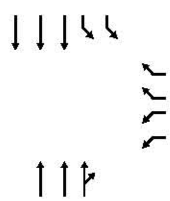
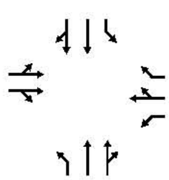
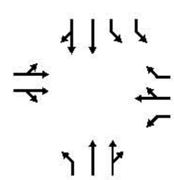
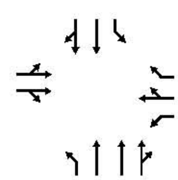
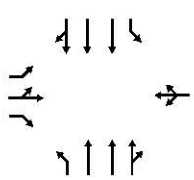
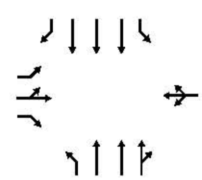
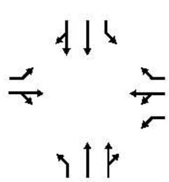
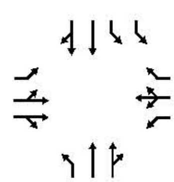
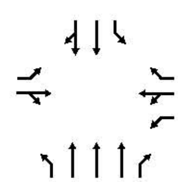
As indicated, all of the analyzed intersections under Future Ambient (2020) with LCP Amendment (Pipeline Projects) with the Revised Set of Intersection Improvement Projects are projected to operate at better V/C ratios and levels of service than the Future Ambient (2010) conditions in the 1991/94 DKS Study.

TABLE 13
SUMMARY OF INTERSECTION LANE GEOMETRY - WITHOUT AND WITH IMPROVEMENTS

	STREET	2009 CONDITIONS [1]	2009 STUDY PROPOSED AMENDMENT WITH IMPROVEMENTS [1]	1991/1994 DKS STUDY APPROVED LCP WITH MITIGATIONS
1	N/S: Via Marina-Ocean Av E/W: Washington Bl (Traffic Signal)		Same as Existing	Same as Existing
2	N/S: Via Marina E/W: Admiralty Wy (Traffic Signal)		ALTERNATIVE A 	
			ALTERNATIVE B Via Marina 	
3	N/S: Via Marina E/W: Panay Wy (Traffic Signal)		Same as Existing	Same as Existing
4	N/S: Via Marina E/W: Marquesas Wy (Traffic Signal)		Same as Existing	Same as Existing
5	N/S: Via Marina E/W: Tahiti Wy (Traffic Signal)		Same as Existing	Same as Existing
6	N/S: Via Marina E/W: Bora Bora Wy (Stop-Controlled on minor approach)		Same as Existing	Same as Existing

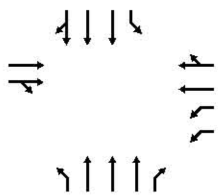
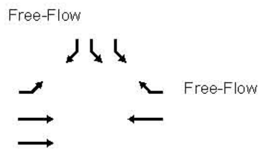
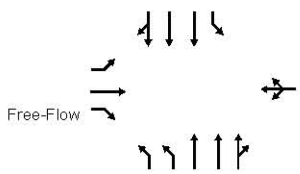
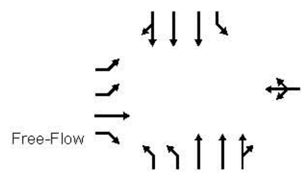
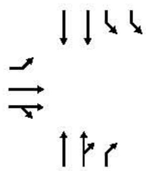
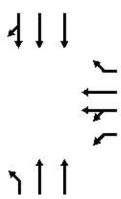
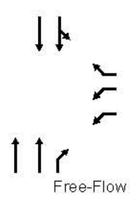
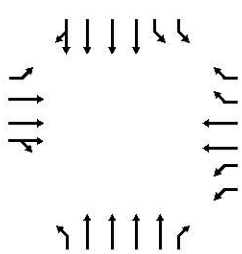
[1] All signalized intersections include ATSAC and ATCS credit of 0.10.

TABLE 13 (continued)
SUMMARY OF INTERSECTION LANE GEOMETRY - WITHOUT AND WITH IMPROVEMENTS

	STREET	2009 CONDITIONS [1]	2009 STUDY PROPOSED AMENDMENT WITH IMPROVEMENTS [1]	1991/1994 DKS STUDY APPROVED LCP WITH MITIGATIONS
7	N/S: Palawan Wy E/W: Admiralty Wy (Traffic Signal)		ALTERNATIVE A 	
			ALTERNATIVE B 	
8	N/S: Lincoln Bl E/W: Washington Bl (Traffic Signal)		Same as Existing	Same as Existing
9	N/S: Lincoln Bl E/W: SR-90 On/Off Ramps (Traffic Signal)		Same as Existing	Same as Existing
10	N/S: Admiralty Wy E/W: Bali Wy (Traffic Signal)			
11	N/S: Lincoln Bl E/W: Bali Wy (Traffic Signal)		Same as Existing	
12	N/S: Admiralty Wy E/W: Mindanao Wy (Traffic Signal)			

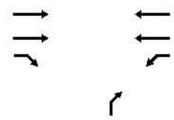
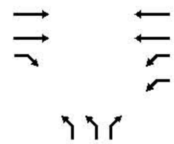
[1] All signalized intersections include ATSAC and ATCS credit of 0.10.

TABLE 13 (continued)
SUMMARY OF INTERSECTION LANE GEOMETRY - WITHOUT AND WITH IMPROVEMENTS

	STREET	2009 CONDITIONS [1]	2009 STUDY PROPOSED AMENDMENT WITH IMPROVEMENTS [1]	1991/1994 DKS STUDY APPROVED LCP WITH MITIGATIONS
13	N/S: Lincoln Bl E/W: Mindanao Wy (Traffic Signal)		Same as Existing	Same as Existing
14	N/S: Admiralty Wy E/W: Fiji Wy (Traffic Signal)		Same as Existing	Widen SB Appoach Provide 3 through lanes
15	N/S: Lincoln Bl E/W: Fiji Wy (Traffic Signal)		Same as Existing	
16	N/S: Mindanao Wy E/W: Marina Expressway (SR-90) East (Traffic Signal)		Same as Existing	Same as Existing
17	N/S: Mindanao Wy E/W: Marina Expressway (SR-90) West (Traffic Signal)		Same as Existing	Same as Existing
18	N/S: Culver Bl E/W: Jefferson Bl (Traffic Signal)		Same as Existing	Same as Existing
19	N/S: Lincoln Bl E/W: Jefferson Bl (Traffic Signal)		Same as Existing	Same as Existing

[1] All signalized intersections include ATSAC and ATCS credit of 0.10.

TABLE 13 (continued)
SUMMARY OF INTERSECTION LANE GEOMETRY - WITHOUT AND WITH IMPROVEMENTS

		STREET	2009 CONDITIONS [1]	2009 STUDY PROPOSED AMENDMENT WITH IMPROVEMENTS [1]	1991/1994 DKS STUDY APPROVED LCP WITH MITIGATIONS
20	N/S:	Palawan Way	Stop-controlled	Add Signal w/ATSAC & ATCS [2]	
	E/W:	Washington Bl			Same as Existing

[1] All signalized intersections include ATSAC and ATCS credit of 0.10.
[2] Not a part of the Revised Set of Intersection Improvements

TABLE 14

SUMMARY OF LEVEL OF SERVICE ANALYSIS - FUTURE AMBIENT (2020) LCP AMENDMENT (PIPELINE PROJECTS) AND IMPROVEMENTS

			1991/1994 Approved Study [2] Ambient (2010) Conditions		2009 Study Ambient (2020) with LCP Amendment (Pipeline Projects) with Improvements		Difference in
Map	**INTERSECTION**	**Peak Hour**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**
1	Via Marina Washington Boulevard	AM	0.75	C	0.49	A	-0.26
		PM	1.05	F	0.73	C	-0.32
					Alternative A		
2	Via Marina Admiralty Way	AM	0.56	A	0.30	A	-0.26
		PM	0.91	E	0.51	A	-0.40
					Alternative B		
					0.41	A	-0.15
					0.61	B	-0.30
3	Via Marina Panay Way	AM	0.63	B	0.44	A	-0.19
		PM	0.59	A	0.33	A	-0.26
4	Via Marina Marquesas Way	AM	0.35	A	0.38	A	0.03
		PM	0.44	A	0.29	A	-0.15
5	Via Marina Tahiti Way	AM	0.46	A	0.27	A	-0.19
		PM	0.43	A	0.18	A	-0.26
6	Via Marina Bora Bora Way [1]	AM	0.38	A	0.36	A	-0.02
		PM	0.37	A	0.33	A	-0.04
					Alternative A		
7	Palawan Way Admiralty Way	AM	0.75	C	0.48	A	-0.27
		PM	1.16	F	0.77	C	-0.39
					Alternative B		
					0.48	A	-0.27
					0.72	C	-0.44
8	Lincoln Boulevard Washington Boulevard	AM	1.41	F	0.80	C	-0.61
		PM	1.67	F	0.89	D	-0.78
9	Lincoln Boulevard Marina Expressway	AM	1.16	F	0.75	C	-0.41
		PM	1.34	F	0.73	C	-0.61
10	Admiralty Way Bali Way	AM	0.63	B	0.41	A	-0.22
		PM	1.08	F	0.62	B	-0.46
11	Lincoln Boulevard Bali Way	AM	0.80	C	0.46	A	-0.34
		PM	1.14	F	0.61	B	-0.53

TABLE 14 (continued)
SUMMARY OF LEVEL OF SERVICE ANALYSIS - FUTURE AMBIENT (2020) LCP AMENDMENT (PIPELINE PROJECTS) AND IMPROVEMENTS

			1991/1994 Approved Study [2] Ambient (2010) Conditions		2009 Study Ambient (2020) with LCP Amendment (Pipeline Projects) with Improvements		Difference in
Map □	INTERSECTION	Peak Hour	V/C	LOS	V/C	LOS	V/C
12	Admiralty Way □ Mindanao Way	AM	0.88	D	0.47	A	-0.41
		PM	1.10	F	0.69	B	-0.41
13	Lincoln Boulevard □ Mindanao Way	AM	1.24	F	0.77	C	-0.47
		PM	1.26	F	0.88	D	-0.38
14	Admiralty Way □ Fiji Way	AM	0.35	A	0.25	A	-0.10
		PM	0.55	A	0.44	A	-0.11
15	Lincoln Boulevard □ Fiji Way	AM	0.80	C	0.58	A	-0.22
		PM	1.18	F	0.85	D	-0.33
16	Mindanao Way □ Marina Expressway EB	AM	1.20	F	0.73	C	-0.47
		PM	1.32	F	0.86	D	-0.46
17	Mindanao Way □ Marina Expressway WB	AM	0.83	D	0.43	A	-0.40
		PM	1.14	F	0.62	B	-0.52
18	Culver Boulevard □ Jefferson Boulevard	AM	1.28	F	0.89	D	-0.39
		PM	1.40	F	0.95	E	-0.45
19	Lincoln Boulevard □ Jefferson Boulevard	AM	1.42	F	0.59	A	-0.83
		PM	1.38	F	0.78	C	-0.61
20	Palawan Way □ Washington Boulevard [1]	AM	n□a	-	0.46	A	-
		PM	n□a	-	0.44	A	-

[1] Unsignalized intersection - stop-controlled on minor approach(es).
[2] Source: *Marina del Rey Traffic Study,* DKS Associates, January 1991
and *Marina del Rey Traffic Study Addendum-Final Report,* DKS Associates, May 1994

TABLE 14 (continued)
SUMMARY OF LEVEL OF SERVICE ANALYSIS - FUTURE AMBIENT (2020) LCP AMENDMENT (PIPELINE PROJECTS) AND IMPROVEMENTS

Map □	INTERSECTION	Peak Hour	1991/1994 Approved Study [2] Ambient (2010) Conditions V/C	1991/1994 Approved Study [2] Ambient (2010) Conditions LOS	2009 Study Ambient (2020) with LCP Amendment (Pipeline Projects) with Improvements V/C	2009 Study Ambient (2020) with LCP Amendment (Pipeline Projects) with Improvements LOS	Difference in V/C
WITHOUT PALAWAN WAY/WASHINGTON BOULEVARD IMPROVEMENT							
1	Via Marina □ Washington Boulevard	AM	0.75	C	0.61	B	-0.14
		PM	1.05	F	0.84	D	-0.21
					Alternative A		
2	Via Marina □ Admiralty Way	AM	0.56	A	0.40	A	-0.17
		PM	0.91	E	0.56	A	-0.36
					Alternative B		
					0.59	A	0.03
					0.66	B	-0.25
					Alternative A		
7	Palawan Way □ Admiralty Way	AM	0.75	C	0.48	A	-0.27
		PM	1.16	F	0.78	C	-0.38
					Alternative B		
					0.48	A	-0.27
					0.73	C	-0.44
20	Palawan Way □ Washington Boulevard [1]	AM	n□a	-	0.77	C	-
		PM	n□a	-	0.88	D	-

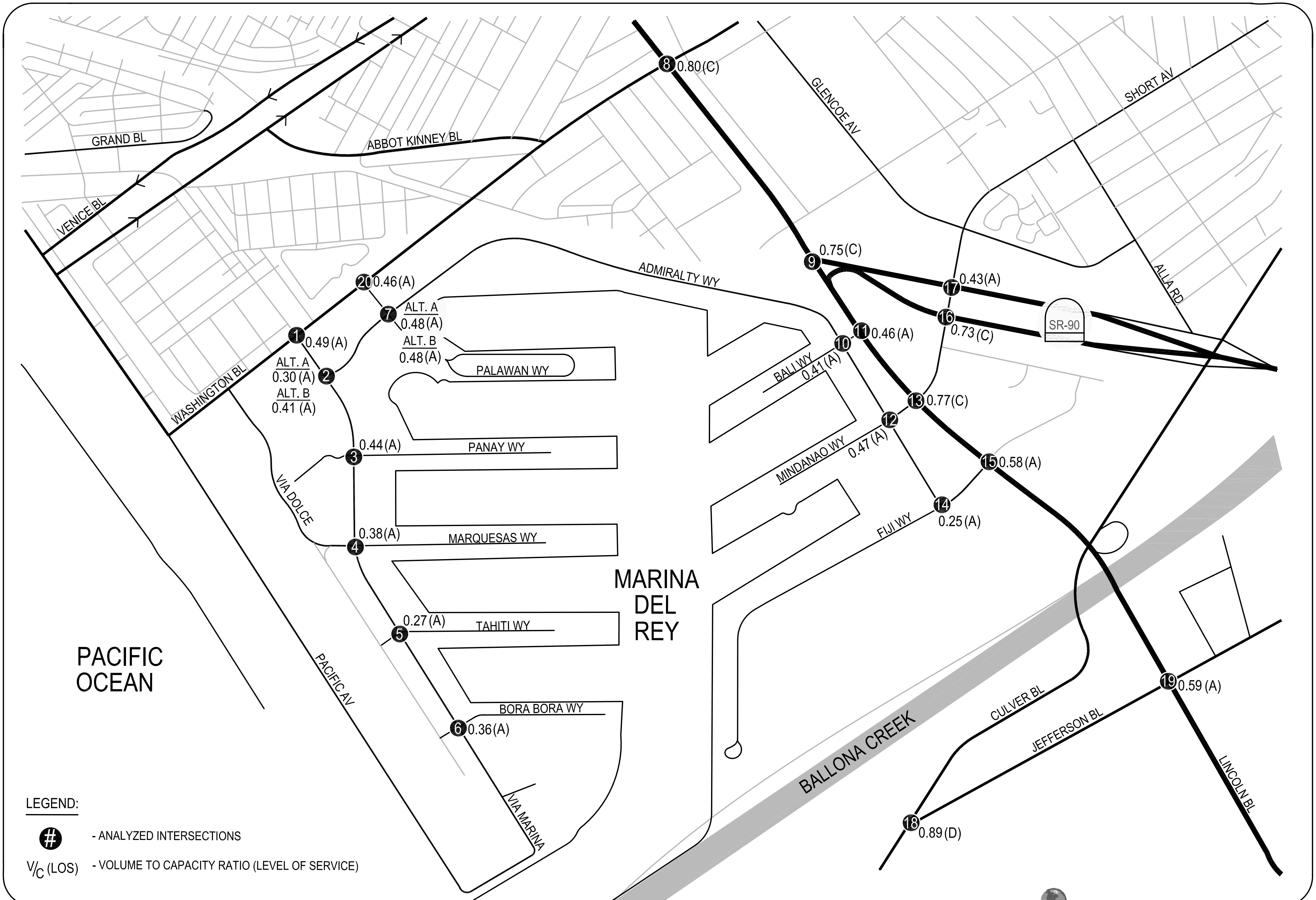


FIGURE 19
FUTURE AMBIENT (2020) WITH PIPELINE PROJECTS AND IMPROVEMENTS
AM PEAK HOUR LEVELS OF SERVICE

RAJU Associates, Inc.

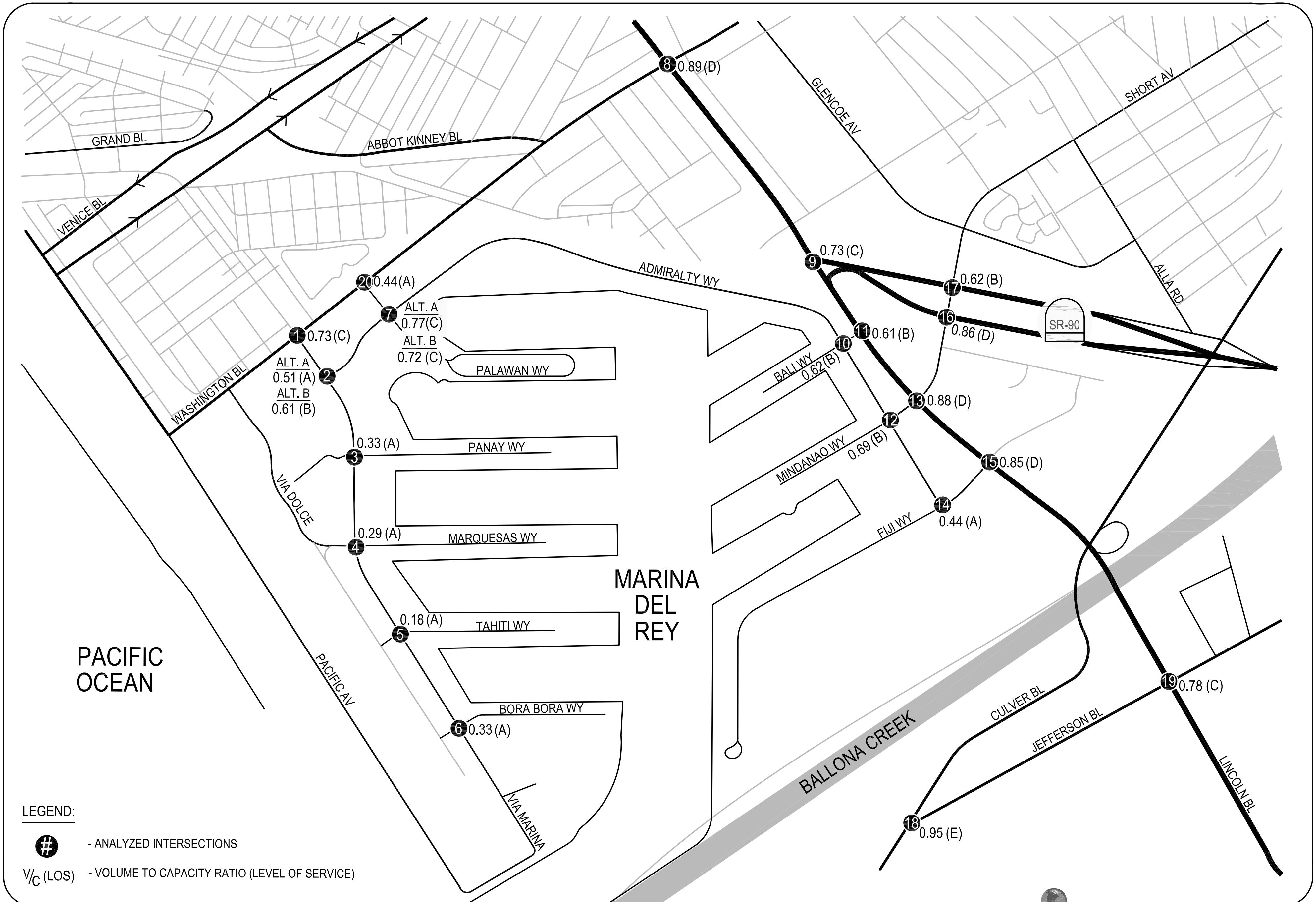


FIGURE 20
FUTURE AMBIENT (2020) WITH PIPELINE PROJECTS AND IMPROVEMENTS
PM PEAK HOUR LEVELS OF SERVICE

RAJU Associates, Inc.

FUTURE AMBIENT (2020) WITH PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS) AND TRANSPORTATION IMPROVEMENTS TRAFFIC ANALYSIS AND EVALUATION

With the improvements in place and including improvements at Palawan Way/Washington Boulevard (consisting of provision of a traffic signal and restriping the Palawan Way approach at this intersection), traffic shifts would occur at the study intersections of Via Marina-Ocean Avenue / Washington Boulevard, Via Marina /Admiralty Way and Palawan Way /Admiralty Way. Both Future Ambient (2020) with Proposed LCP Buildout (including Pipeline Projects) and the Revised Set of Intersection Improvement Projects scenarios with and without the Washington Boulevard / Palawan Way signalization improvement have been evaluated. The resulting volumes for both scenarios are shown in Appendix N and represent the Future Ambient (2020) with Proposed LCP Buildout (including Pipeline Projects) with the Revised Set of Intersection Improvement Projects traffic volumes.

These peak hour traffic volumes were analyzed to determine the volume to capacity (V/C) ratio and LOS at each of the analyzed intersections. The results of this analysis are summarized in Table 15. These results are also presented in Figures 21 and 22 for AM and PM peak hours, respectively. As indicated in the table, with the Washington Boulevard /Palawan Way intersection improvement and all the other transportation improvements described in the previous section, all 20 study intersections during the morning peak hour and 15 of the 20 intersections during the evening peak hour are projected to operate at LOS D or better. The remaining intersections in the evening peak hour are projected to operate at LOS E or F as listed below.

<u>PM Peak Hour</u>

- Lincoln Boulevard /Washington Boulevard – LOS E
- Lincoln Boulevard /Mindanao Way – LOS E
- Lincoln Boulevard /Fiji Way – LOS E
- Mindanao Way /Marina Expressway EB – LOS E
- Culver Boulevard /Jefferson Boulevard – LOS F

TABLE 15
SUMMARY OF LEVEL OF SERVICE ANALYSIS - FUTURE AMBIENT (2020) WITH PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS) AND IMPROVEMENTS

			1991/1994 Study [2] Future Ambient (2010) w/Approved LCP Development with Mitigations		2009 Study Future (2020) with Proposed LCP Buildout (incl. Pipeline Projects) with Improvements		Difference in
Map □	INTERSECTION	Peak Hour	V/C	LOS	V/C	LOS	V/C
1	Via Marina □ Washington Boulevard	AM	1.04	F	0.63	B	-0.41
		PM	1.38	F	0.86	D	-0.52
					Alternative A		
2	Via Marina □ Admiralty Way	AM	0.63	B	0.38	A	-0.25
		PM	0.82	D	0.60	B	-0.22
					Alternative B		
					0.50	A	-0.13
					0.73	C	-0.09
3	Via Marina □ Panay Way	AM	0.81	D	0.65	B	-0.16
		PM	0.74	C	0.47	A	-0.27
4	Via Marina □ Marquesas Way	AM	0.45	A	0.43	A	-0.02
		PM	0.53	A	0.35	A	-0.18
5	Via Marina □ Tahiti Way	AM	0.58	A	0.31	A	-0.27
		PM	0.53	A	0.19	A	-0.34
6	Via Marina □ Bora Bora Way [1]	AM	0.49	A	0.41	A	-0.09
		PM	0.46	A	0.35	A	-0.11
					Alternative A		
7	Palawan Way □ Admiralty Way	AM	0.79	C	0.63	B	-0.16
		PM	0.94	E	0.88	D	-0.06
					Alternative B		
					0.61	B	-0.18
					0.82	D	-0.12
8	Lincoln Boulevard □ Washington Boulevard	AM	1.47	F	0.86	D	-0.62
		PM	1.47	F	0.98	E	-0.49
9	Lincoln Boulevard □ Marina Expressway	AM	1.21	F	0.78	C	-0.43
		PM	1.21	F	0.77	C	-0.44
10	Admiralty Way □ Bali Way	AM	0.81	D	0.48	A	-0.33
		PM	0.98	E	0.74	C	-0.24
11	Lincoln Boulevard □ Bali Way	AM	0.82	D	0.47	A	-0.35
		PM	1.04	F	0.68	B	-0.37

TABLE 15 (continued)
SUMMARY OF LEVEL OF SERVICE ANALYSIS - FUTURE AMBIENT (2020) WITH PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS) AND IMPROVEMENTS

			1991/1994 Study [2] Future Ambient (2010) w/Approved LCP Development with Mitigations		2009 Study Future (2020) with Proposed LCP Buildout (incl. Pipeline Projects) with Improvements		Difference in
Map □	**INTERSECTION**	**Peak Hour**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**
12	Admiralty Way □ Mindanao Way	AM	0.78	C	0.57	A	-0.21
		PM	1.00	F	0.81	D	-0.19
13	Lincoln Boulevard □ Mindanao Way	AM	1.21	F	0.86	D	-0.35
		PM	1.25	F	0.95	E	-0.30
14	Admiralty Way □ Fiji Way	AM	0.60	B	0.28	A	-0.32
		PM	0.83	D	0.51	A	-0.32
15	Lincoln Boulevard □ Fiji Way	AM	0.83	D	0.61	B	-0.22
		PM	1.07	F	0.92	E	-0.15
16	Mindanao Way □ Marina Expressway EB	AM	1.18	F	0.82	D	-0.36
		PM	1.33	F	0.90	E	-0.43
17	Mindanao Way □ Marina Expressway WB	AM	0.81	D	0.47	A	-0.34
		PM	1.07	F	0.68	B	-0.40
18	Culver Boulevard □ Jefferson Boulevard	AM	1.34	F	0.89	D	-0.45
		PM	1.48	F	0.95	E	-0.53
19	Lincoln Boulevard □ Jefferson Boulevard	AM	1.37	F	0.61	B	-0.76
		PM	1.46	F	0.78	C	-0.68
20	Palawan Way □ Washington Boulevard	AM	n□a	-	0.54	A	-
		PM	n□a	-	0.50	A	-

[1] Unsignalized intersection - stop-controlled on minor approach(es).
[2] Source: *Marina del Rey Traffic Study,* DKS Associates, January 1991
and *Marina del Rey Traffic Study Addendum-Final Report,* DKS Associates, May 1994

TABLE 15 (continued)
SUMMARY OF LEVEL OF SERVICE ANALYSIS - FUTURE AMBIENT (2020) WITH PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS) AND IMPROVEMENTS

			1991/1994 Study [2] Future Ambient (2010) w/Approved LCP Development with Mitigations		2009 Study Future (2020) with Proposed LCP Buildout (incl. Pipeline Projects) with Improvements		Difference in
Map □	INTERSECTION	Peak Hour	V/C	LOS	V/C	LOS	V/C
WITHOUT PALAWAN WAY/WASHINGTON BOULEVARD IMPROVEMENT							
1	Via Marina □ Washington Boulevard	AM	1.04	F	0.74	C	-0.30
		PM	1.38	F	0.97	E	-0.41
					Alternative A		
2	Via Marina □ Admiralty Way	AM	0.63	B	0.45	A	-0.18
		PM	0.82	D	0.65	B	-0.17
					Alternative B		
					0.65	B	0.02
					0.77	C	-0.05
					Alternative A		
7	Palawan Way □ Admiralty Way	AM	0.79	C	0.63	B	-0.16
		PM	0.94	E	0.89	D	-0.05
					Alternative B		
					0.61	B	-0.18
					0.83	D	-0.11
20	Palawan Way □ Washington Boulevard	AM	n□a	-	0.90	D	-
		PM	n□a	-	0.98	E	-

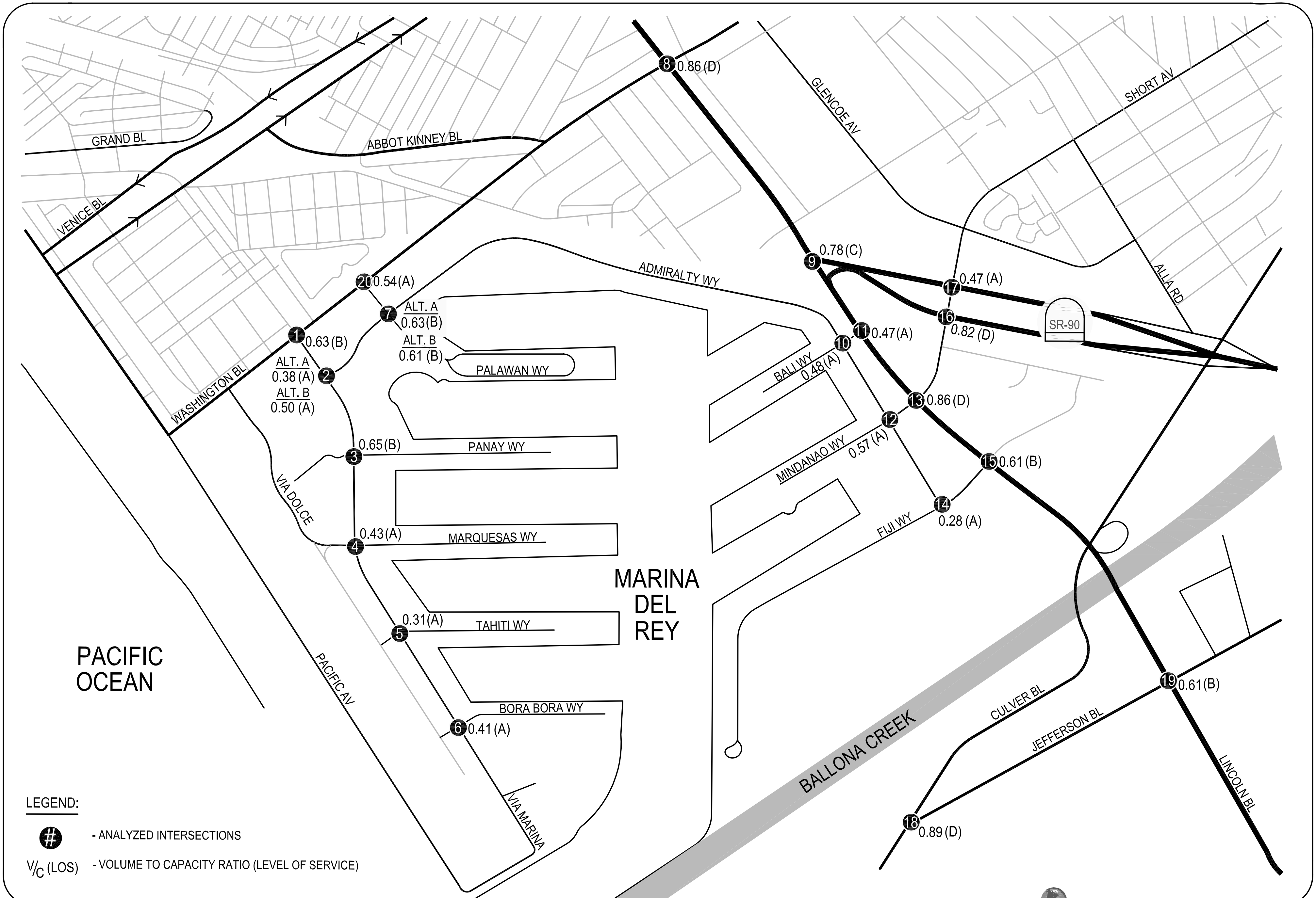


FIGURE 21
FUTURE AMBIENT (2020) PLUS PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS) AND IMPROVEMENTS AM PEAK HOUR LEVELS OF SERVICE

RAJU Associates, Inc.

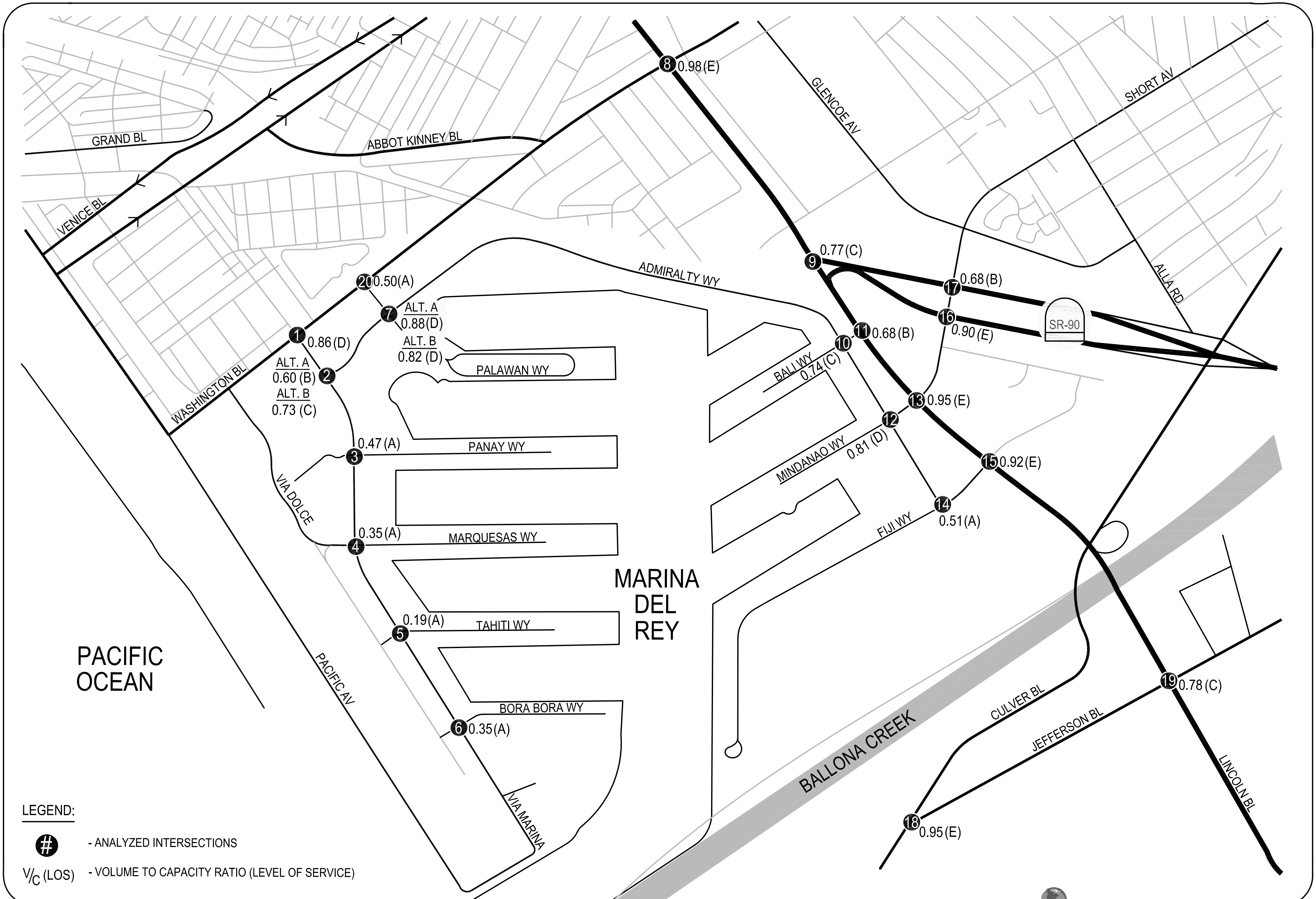


FIGURE 22
FUTURE AMBIENT (2020) PLUS PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS) AND IMPROVEMENTS PM PEAK HOUR LEVELS OF SERVICE

RAJU Associates, Inc.

For the scenario without the Washington Boulevard /Palawan Way intersection improvement, it can also be observed from Table 15 that all 20 intersections in the morning peak hour and 13 of the 20 intersections in the evening peak hour are projected to operate at level of service (LOS) D or better. In addition to the locations listed under the scenario with Washington Boulevard / Palawan Way intersection improvement, the other locations that would be operating at failing levels of service under this scenario would be:

<u>PM Peak Hour</u>

- Palawan Way /Washington Boulevard – LOS F
- Via Marina Way /Washington Boulevard – LOS E

The capacity calculation worksheets for Future Ambient (2020) with Proposed LCP Buildout with Improvement conditions (with and without the Washington /Palawan intersection improvement) are attached in Appendix N of the report.

COMPARISON TO FUTURE AMBIENT (2010) APPROVED LCP WITH MITIGATIONS CONDITIONS IN THE 1991/94 DKS STUDY

Table 15 also compares the Future Ambient (2020) with Proposed LCP Buildout (including Pipeline Projects) with the Revised Set of Intersection Improvement Projects to the Future Ambient (2010) with Approved LCP with Mitigation conditions from the 1991–1994 DKS Study. Comparisons of V/C ratios and Levels of Service at each of the analysis locations under the two scenarios during AM and PM peak hours, respectively, are also provided in Figures 23 and 24.

As indicated, all of the analyzed intersections under Future Ambient (2020) with Proposed LCP Buildout (including Pipeline Projects) with the Revised Set of Intersection Improvement Projects are projected to operate at better V/C ratios and levels of service than the Future Ambient (2010) with Approved LCP and Mitigations conditions in the 1991/94 DKS Study.

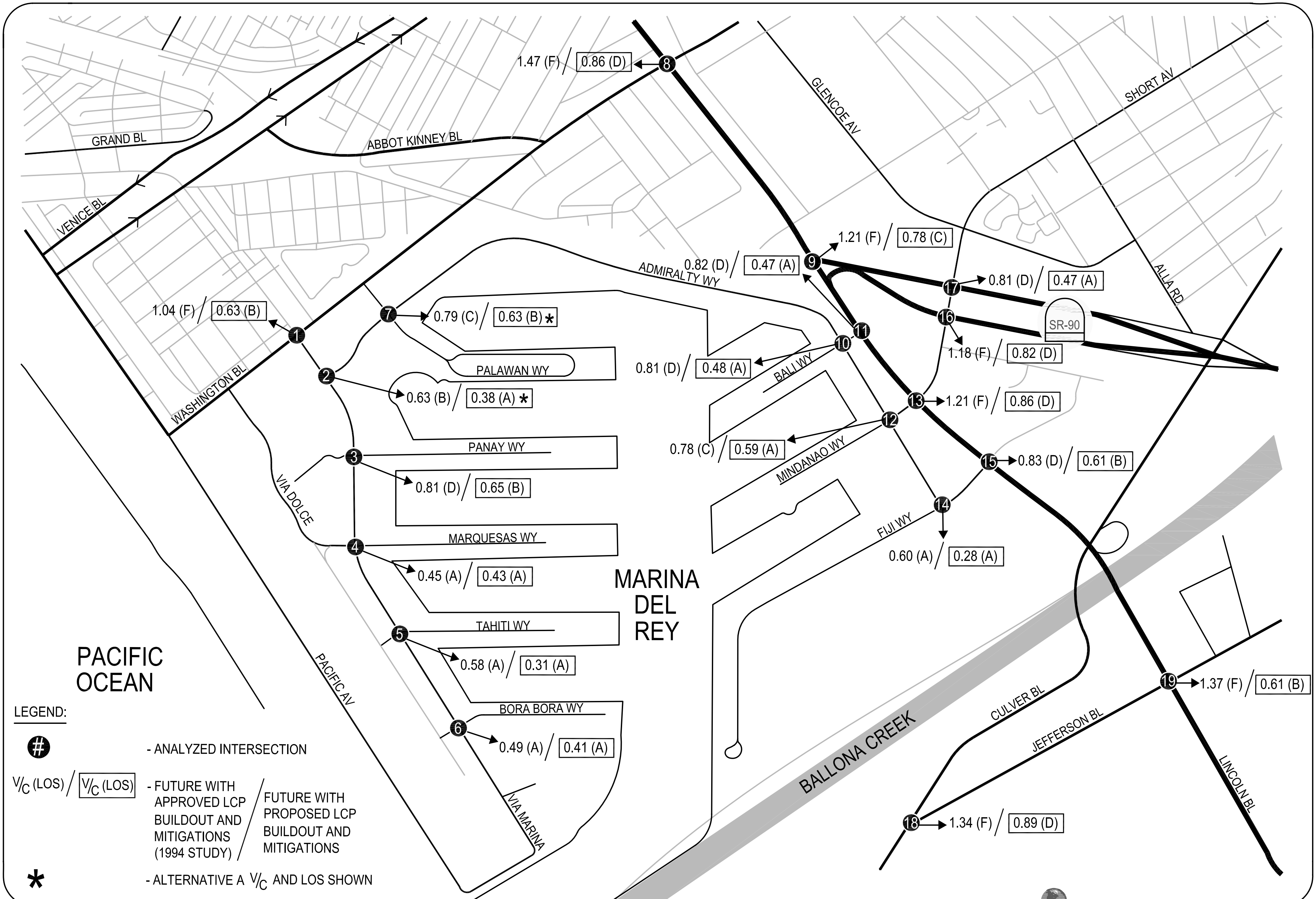


FIGURE 23
FUTURE AMBIENT (2020) WITH PROPOSED LCP BUILDOUT CONDITIONS AND IMPROVEMENTS VS. APPROVED LCP BUILDOUT AND MITIGATIONS (1991/94 STUDY) - AM PEAK HOUR

RAJU Associates, Inc.

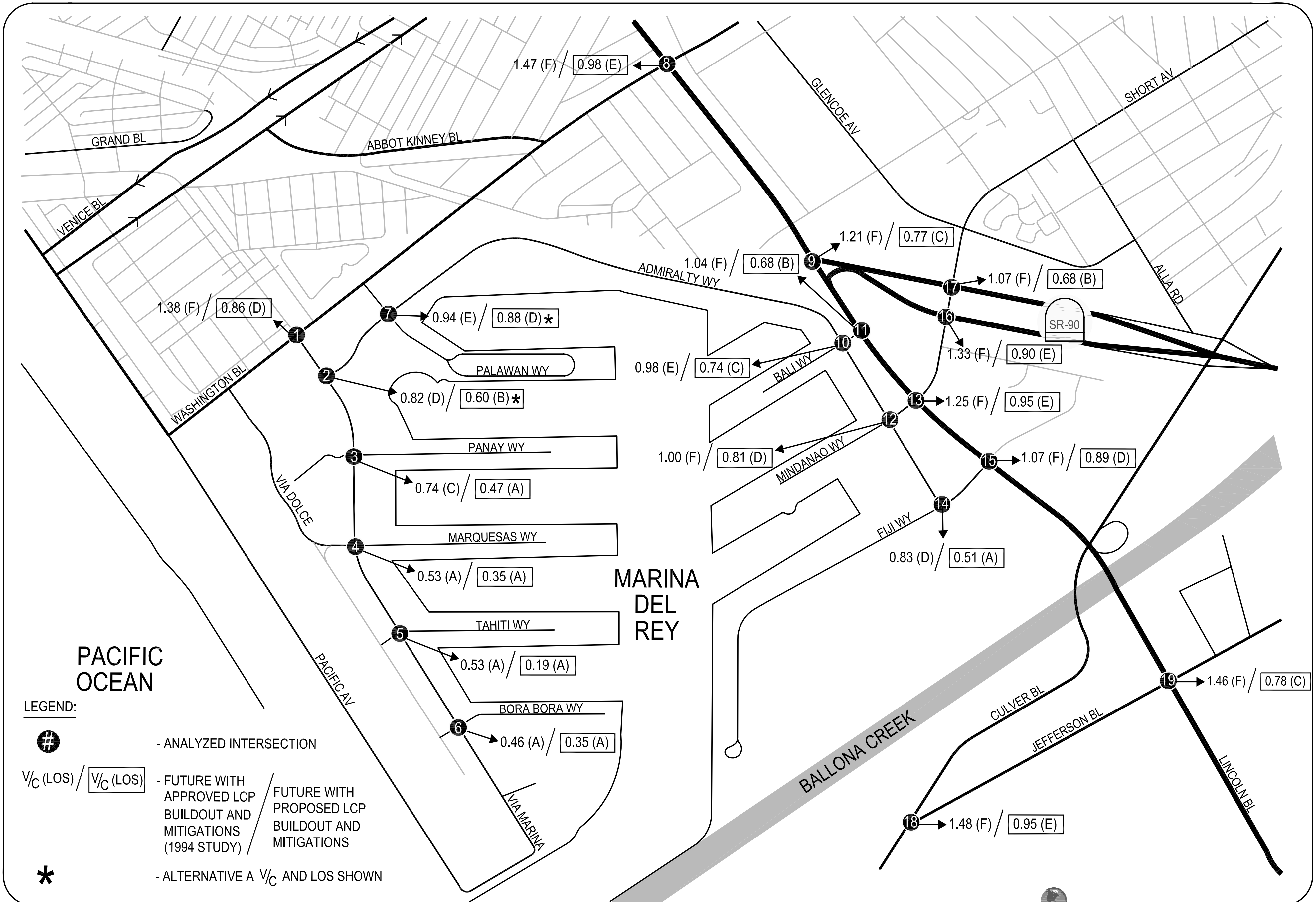


FIGURE 24
FUTURE AMBIENT (2020) WITH PROPOSED LCP BUILDOUT CONDITIONS AND IMPROVEMENTS VS. APPROVED LCP BUILDOUT AND MITIGATIONS (1991/94 STUDY) - PM PEAK HOUR

RAJU Associates, Inc.

CUMULATIVE (2020) WITH LCP AMENDMENT (PIPELINE PROJECTS) AND TRANSPORTATION IMPROVEMENTS TRAFFIC ANALYSIS AND EVALUATION

The Future Cumulative (2020) with LCP Amendment (Pipeline Projects) with the Revised Set of Intersection Improvement Projects peak hour traffic volumes (attached in Appendix O) were analyzed to determine the volume to capacity (V/C) ratio and LOS at each of the analyzed intersections. The results of this analysis are summarized in Table 16. These results are also presented in Figures 25 and 26 for AM and PM peak hours, respectively. The capacity calculation worksheets are also included in Appendix O.

As indicated in the Table 16, with the Washington Boulevard – Palawan Way intersection improvement and all the other transportation improvements described in the previous section, 18 of the 20 study intersections during the morning peak hour and 15 of the 20 intersections during the evening peak hour are projected to operate at LOS D or better. The remaining intersections are projected to operate at LOS E or F as listed below.

<u>AM Peak Hour</u>

- Lincoln Boulevard –Washington Boulevard – LOS E
- Culver Boulevard –Jefferson Boulevard – LOS E

<u>PM Peak Hour</u>

- Lincoln Boulevard –Washington Boulevard – LOS F
- Lincoln Boulevard –Mindanao Way – LOS E
- Lincoln Boulevard –Fiji Way – LOS E
- Culver Boulevard –Jefferson Boulevard – LOS F
- Lincoln Boulevard –Jefferson Boulevard – LOS E

For the scenario without the Washington Boulevard –Palawan Way intersection improvement, but with all the other transportation improvements within the Marina, the same number of intersections would be operating at LOS D or better as those projected under the conditions with the Washington Boulevard –Palawan Way intersection improvement.

TABLE 16

SUMMARY OF LEVEL OF SERVICE ANALYSIS - FUTURE CUMULATIVE (2020) WITH LCP AMENDMENT (PIPELINE PROJECTS) AND IMPROVEMENTS

			1991/1994 Approved Study [2] Cumulative (2010) Conditions		2009 Study Cumulative (2020) with LCP Amendment (Pipeline Projects) with Improvements		Difference in
Map	INTERSECTION	Peak Hour	V/C	LOS	V/C	LOS	V/C
1	Via Marina Washington Boulevard	AM	1.06	F	0.52	A	-0.54
		PM	1.68	F	0.78	C	-0.90
					Alternative A		
2	Via Marina Admiralty Way	AM	0.79	C	0.32	A	-0.47
		PM	1.27	F	0.53	A	-0.74
					Alternative B		
					0.43	A	-0.36
					0.64	B	-0.63
3	Via Marina Panay Way	AM	0.74	C	0.45	A	-0.29
		PM	0.72	C	0.34	A	-0.38
4	Via Marina Marquesas Way	AM	0.46	A	0.39	A	-0.07
		PM	0.58	A	0.29	A	-0.29
5	Via Marina Tahiti Way	AM	0.53	A	0.28	A	-0.25
		PM	0.55	A	0.19	A	-0.37
6	Via Marina Bora Bora Way [1]	AM	0.44	A	0.37	A	-0.07
		PM	0.45	A	0.34	A	-0.11
					Alternative A		
7	Palawan Way Admiralty Way	AM	0.93	E	0.51	A	-0.42
		PM	1.38	F	0.79	C	-0.59
					Alternative B		
					0.51	A	-0.42
					0.74	C	-0.64
8	Lincoln Boulevard Washington Boulevard	AM	1.94	F	0.94	E	-1.00
		PM	2.40	F	1.03	F	-1.37
9	Lincoln Boulevard Marina Expressway	AM	1.77	F	0.88	D	-0.89
		PM	2.04	F	0.88	D	-1.16
10	Admiralty Way Bali Way	AM	0.84	D	0.42	A	-0.42
		PM	1.32	F	0.65	B	-0.67
11	Lincoln Boulevard Bali Way	AM	1.08	F	0.55	A	-0.53
		PM	1.49	F	0.70	B	-0.79

TABLE 16 (continued)
SUMMARY OF LEVEL OF SERVICE ANALYSIS - FUTURE CUMULATIVE (2020) WITH LCP AMENDMENT (PIPELINE PROJECTS) AND IMPROVEMENTS

Map □	INTERSECTION	Peak Hour	1991/1994 Approved Study [2] Cumulative (2010) Conditions V/C	LOS	2009 Study Cumulative (2020) with LCP Amendment (Pipeline Projects) with Improvements V/C	LOS	Difference in V/C
12	Admiralty Way □ Mindanao Way	AM	1.00	E	0.49	A	-0.51
		PM	1.26	F	0.73	C	-0.53
13	Lincoln Boulevard □ Mindanao Way	AM	1.51	F	0.85	D	-0.66
		PM	1.73	F	1.00	E	-0.74
14	Admiralty Way □ Fiji Way	AM	0.86	D	0.28	A	-0.58
		PM	1.20	F	0.47	A	-0.74
15	Lincoln Boulevard □ Fiji Way	AM	1.39	F	0.68	B	-0.71
		PM	1.62	F	0.97	E	-0.66
16	Mindanao Way □ Marina Expressway EB	AM	1.26	F	0.82	D	-0.44
		PM	1.56	F	0.90	D	-0.66
17	Mindanao Way □ Marina Expressway WB	AM	0.94	E	0.46	A	-0.48
		PM	1.33	F	0.68	B	-0.65
18	Culver Boulevard □ Jefferson Boulevard	AM	1.62	F	0.94	E	-0.68
		PM	1.88	F	1.06	F	-0.82
19	Lincoln Boulevard □ Jefferson Boulevard	AM	1.88	F	0.78	C	-1.10
		PM	2.30	F	0.91	E	-1.40
20	Palawan Way □ Washington Boulevard	AM	n□a	-	0.49	A	-
		PM	n□a	-	0.45	A	-

[1] Unsignalized intersection - stop-controlled on minor approach(es).
[2] Source: *Marina del Rey Traffic Study,* DKS Associates, January 1991
and *Marina del Rey Traffic Study Addendum-Final Report,* DKS Associates, May 1994

TABLE 16 (continued)

SUMMARY OF LEVEL OF SERVICE ANALYSIS - FUTURE CUMULATIVE (2020) WITH LCP AMENDMENT (PIPELINE PROJECTS) AND IMPROVEMENTS

Map □	INTERSECTION	Peak Hour	1991/1994 Approved Study [2] Cumulative (2010) Conditions V/C	LOS	2009 Study Cumulative (2020) with LCP Amendment (Pipeline Projects) with Improvements V/C	LOS	Difference in V/C
WITHOUT PALAWAN WAY/WASHINGTON BOULEVARD IMPROVEMENT							
1	Via Marina □ Washington Boulevard	AM	1.06	F	0.64	B	-0.42
		PM	1.68	F	0.86	D	-0.82
					Alternative A		
2	Via Marina □ Admiralty Way	AM	0.79	C	0.41	A	-0.39
		PM	1.27	F	0.58	A	-0.69
					Alternative B		
					0.60	B	-0.19
					0.68	B	-0.59
					Alternative A		
7	Palawan Way □ Admiralty Way	AM	0.93	E	0.51	A	-0.42
		PM	1.38	F	0.80	C	-0.58
					Alternative B		
					0.50	A	-0.43
					0.74	C	-0.64
20	Palawan Way □ Washington Boulevard	AM	n□a	-	0.80	D	-
		PM	n□a	-	0.90	D	-

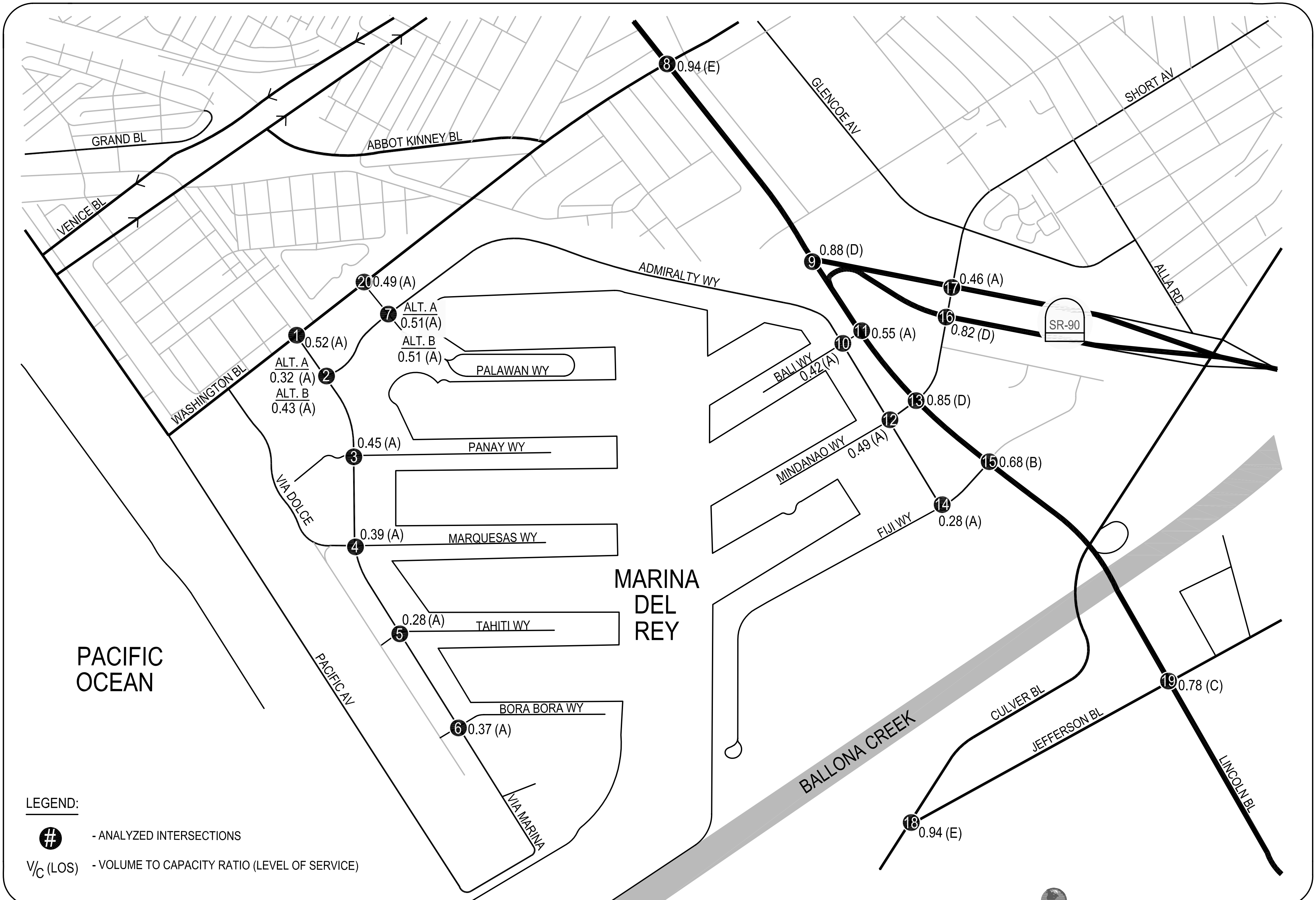


FIGURE 25
CUMULATIVE (2020) WITH PIPELINE PROJECTS AND IMPROVEMENTS
AM PEAK HOUR LEVELS OF SERVICE

RAJU Associates, Inc.

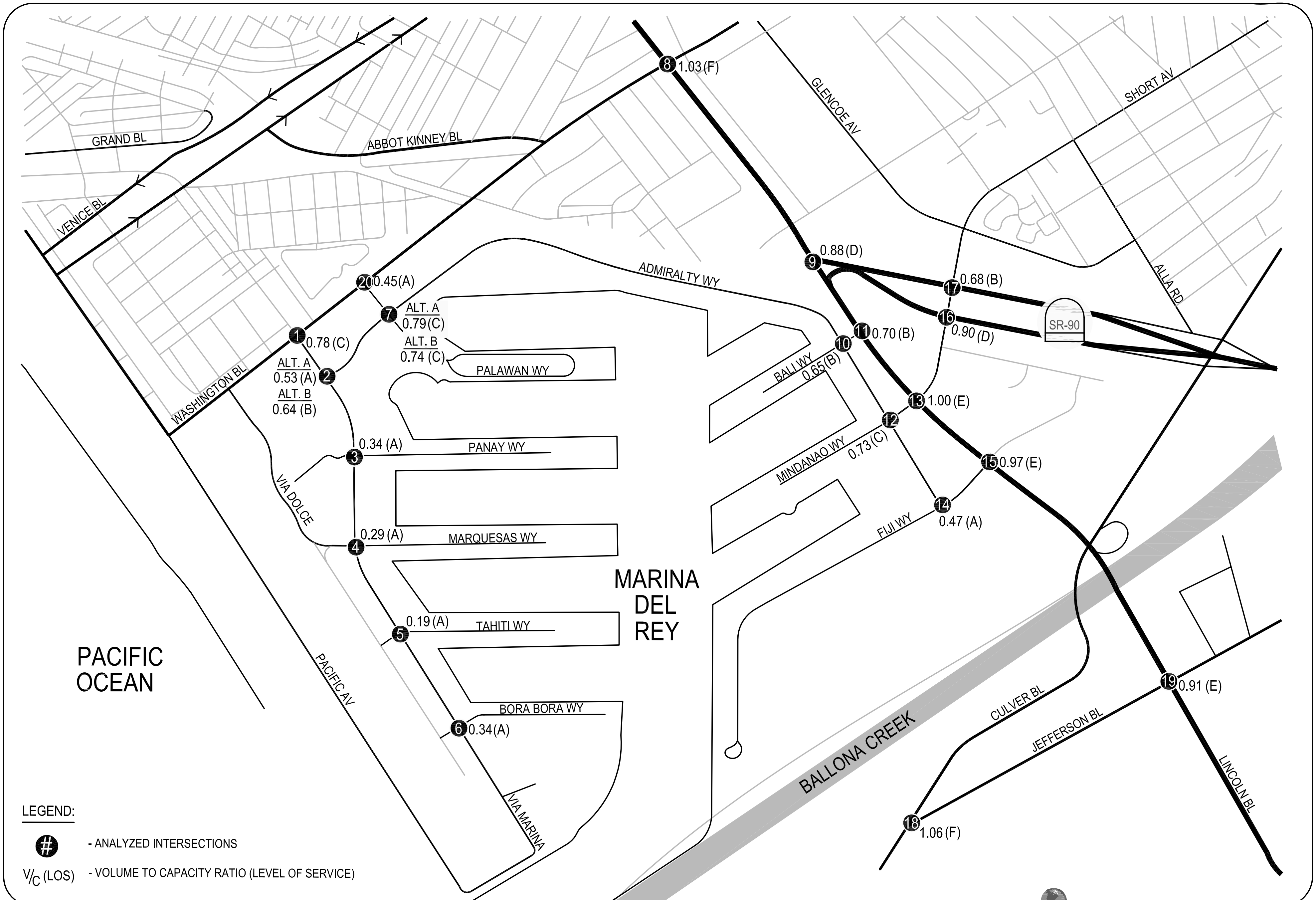


FIGURE 26
CUMULATIVE (2020) WITH PIPELINE PROJECTS AND IMPROVEMENTS
PM PEAK HOUR LEVELS OF SERVICE

RAJU Associates, Inc.

COMPARISON OF FUTURE CUMULATIVE (2020) WITH LCP AMENDMENT WITH TRANSPORTATION IMPROVEMENTS TO FUTURE CUMULATIVE (2010) WITH NO MARINA DEVELOPMENT CONDITIONS IN THE 1991/94 DKS STUDY

Table 16 also compares the Future Cumulative (2020) with LCP Amendment (Pipeline Projects) with the Revised Set of Intersection Improvement Projects to the Future Cumulative (2010) with no Marina Development conditions from the 1991–1994 DKS Study (since there was no cumulative analysis with Marina development in the DKS Study). As indicated, all of the analyzed intersections under Future Cumulative (2020) with LCP Amendment (Pipeline Projects) with the Revised Set of Intersection Improvement Projects are projected to operate at better V/C ratios and levels of service than the Future Cumulative (2010) with no Marina Development conditions in the 1991–94 DKS Study.

CUMULATIVE (2020) WITH PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS) AND TRANSPORTATION IMPROVEMENTS TRAFFIC ANALYSIS AND EVALUATION

The Future Cumulative (2020) with the Proposed LCP Buildout (including Pipeline Projects) with the Revised Set of Intersection Improvement Projects peak hour traffic volumes (attached in Appendix P) were analyzed to determine the volume to capacity (V/C) ratio and LOS at each of the analyzed intersections. The results of this analysis are summarized in Table 17. These results are also presented in Figures 27 and 28 for AM and PM peak hours, respectively. The level of service worksheets are also attached in Appendix P.

As indicated in the Table 17, with the Washington Boulevard – Palawan Way intersection improvement and all the other transportation improvements described in the previous section, 15 of the 20 study intersections during the morning peak hour and 12 of the 20 intersections during the evening peak hour are projected to operate at LOS D or better. The remaining intersections are projected to operate at LOS E or F as listed below.

<u>AM Peak Hour</u>

- Lincoln Boulevard – Washington Boulevard – LOS E
- Lincoln Boulevard – Marina Expressway – LOS E
- Lincoln Boulevard – Mindanao Way – LOS E
- Marina Expressway EB – Mindanao Way – LOS E
- Culver Boulevard – Jefferson Boulevard – LOS E

TABLE 17
SUMMARY OF LEVEL OF SERVICE ANALYSIS - FUTURE CUMULATIVE (2020) WITH PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS) AND IMPROVEMENTS

			1991/1994 Approved Study [2] Cumulative (2010) Conditions		2009 Study Cumulative (2020) with Proposed LCP Development (incl. Pipeline Projects) with Improvements		Difference in
Map	INTERSECTION	Peak Hour	V/C	LOS	V/C	LOS	V/C
1	Via Marina Washington Boulevard	AM	1.06	F	0.66	B	-0.40
		PM	1.68	F	0.89	D	-0.79
					Alternative A		
2	Via Marina Admiralty Way	AM	0.79	C	0.40	A	-0.39
		PM	1.27	F	0.63	B	-0.64
					Alternative B		
					0.53	A	-0.26
					0.75	C	-0.52
3	Via Marina Panay Way	AM	0.74	C	0.66	B	-0.08
		PM	0.72	C	0.48	A	-0.24
4	Via Marina Marquesas Way	AM	0.46	A	0.44	A	-0.02
		PM	0.58	A	0.36	A	-0.22
5	Via Marina Tahiti Way	AM	0.53	A	0.32	A	-0.21
		PM	0.55	A	0.20	A	-0.35
6	Via Marina Bora Bora Way [1]	AM	0.44	A	0.42	A	-0.02
		PM	0.45	A	0.36	A	-0.09
					Alternative A		
7	Palawan Way Admiralty Way	AM	0.93	E	0.66	B	-0.27
		PM	1.38	F	0.91	E	-0.48
					Alternative B		
					0.64	B	-0.29
					0.84	D	-0.54
8	Lincoln Boulevard Washington Boulevard	AM	1.94	F	0.98	E	-0.96
		PM	2.40	F	1.13	F	-1.27
9	Lincoln Boulevard Marina Expressway	AM	1.77	F	0.91	E	-0.86
		PM	2.04	F	0.93	E	-1.11
10	Admiralty Way Bali Way	AM	0.84	D	0.49	A	-0.35
		PM	1.32	F	0.78	C	-0.54
11	Lincoln Boulevard Bali Way	AM	1.08	F	0.58	A	-0.50
		PM	1.49	F	0.77	C	-0.72

TABLE 17 (continued)
SUMMARY OF LEVEL OF SERVICE ANALYSIS - FUTURE CUMULATIVE (2020) WITH PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS) AND IMPROVEMENTS

			1991/1994 Approved Study [2] Cumulative (2010) Conditions		2009 Study Cumulative (2020) with Proposed LCP Development (incl. Pipeline Projects) with Improvements		
Map □	INTERSECTION	Peak Hour	V/C	LOS	V/C	LOS	Difference in V/C
12	Admiralty Way □ Mindanao Way	AM	1.00	E	0.58	A	-0.42
		PM	1.26	F	0.85	D	-0.41
13	Lincoln Boulevard □ Mindanao Way	AM	1.51	F	0.94	E	-0.57
		PM	1.73	F	1.07	F	-0.66
14	Admiralty Way □ Fiji Way	AM	0.86	D	0.31	A	-0.56
		PM	1.20	F	0.54	A	-0.67
15	Lincoln Boulevard □ Fiji Way	AM	1.39	F	0.71	C	-0.68
		PM	1.62	F	1.03	F	-0.59
16	Mindanao Way □ Marina Expressway EB	AM	1.26	F	0.92	E	-0.35
		PM	1.56	F	0.95	E	-0.61
17	Mindanao Way □ Marina Expressway WB	AM	0.94	E	0.50	A	-0.44
		PM	1.33	F	0.74	C	-0.59
18	Culver Boulevard □ Jefferson Boulevard	AM	1.62	F	0.94	E	-0.68
		PM	1.88	F	1.06	F	-0.82
19	Lincoln Boulevard □ Jefferson Boulevard	AM	1.88	F	0.79	C	-1.09
		PM	2.30	F	0.91	E	-1.39
20	Palawan Way □ Washington Boulevard	AM	n□a	-	0.56	A	-
		PM	n□a	-	0.52	A	-

[1] Unsignalized intersection - stop-controlled on minor approach(es).
[2] Source: *Marina del Rey Traffic Study,* DKS Associates, January 1991
and *Marina del Rey Traffic Study Addendum-Final Report,* DKS Associates, May 1994

TABLE 17 (continued)

SUMMARY OF LEVEL OF SERVICE ANALYSIS - FUTURE CUMULATIVE (2020) WITH PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS) AND IMPROVEMENTS

			1991/1994 Approved Study [2] Cumulative (2010) Conditions		2009 Study Cumulative (2020) with Proposed LCP Development (incl. Pipeline Projects) with Improvements		Difference in
Map #	INTERSECTION	Peak Hour	V/C	LOS	V/C	LOS	V/C
WITHOUT PALAWAN WAY/WASHINGTON BOULEVARD IMPROVEMENT							
1	Via Marina / Washington Boulevard	AM	1.06	F	0.77	C	-0.29
		PM	1.68	F	0.99	E	-0.69
					Alternative A		
2	Via Marina / Admiralty Way	AM	0.79	C	0.46	A	-0.33
		PM	1.27	F	0.67	B	-0.60
					Alternative B		
					0.66	B	-0.13
					0.80	C	-0.48
					Alternative A		
7	Palawan Way / Admiralty Way	AM	0.93	E	0.66	B	-0.27
		PM	1.38	F	0.91	E	-0.47
					Alternative B		
					0.64	B	-0.29
					0.85	D	-0.53
20	Palawan Way / Washington Boulevard	AM	n/a	-	0.92	E	-
		PM	n/a	-	1.00	F	-

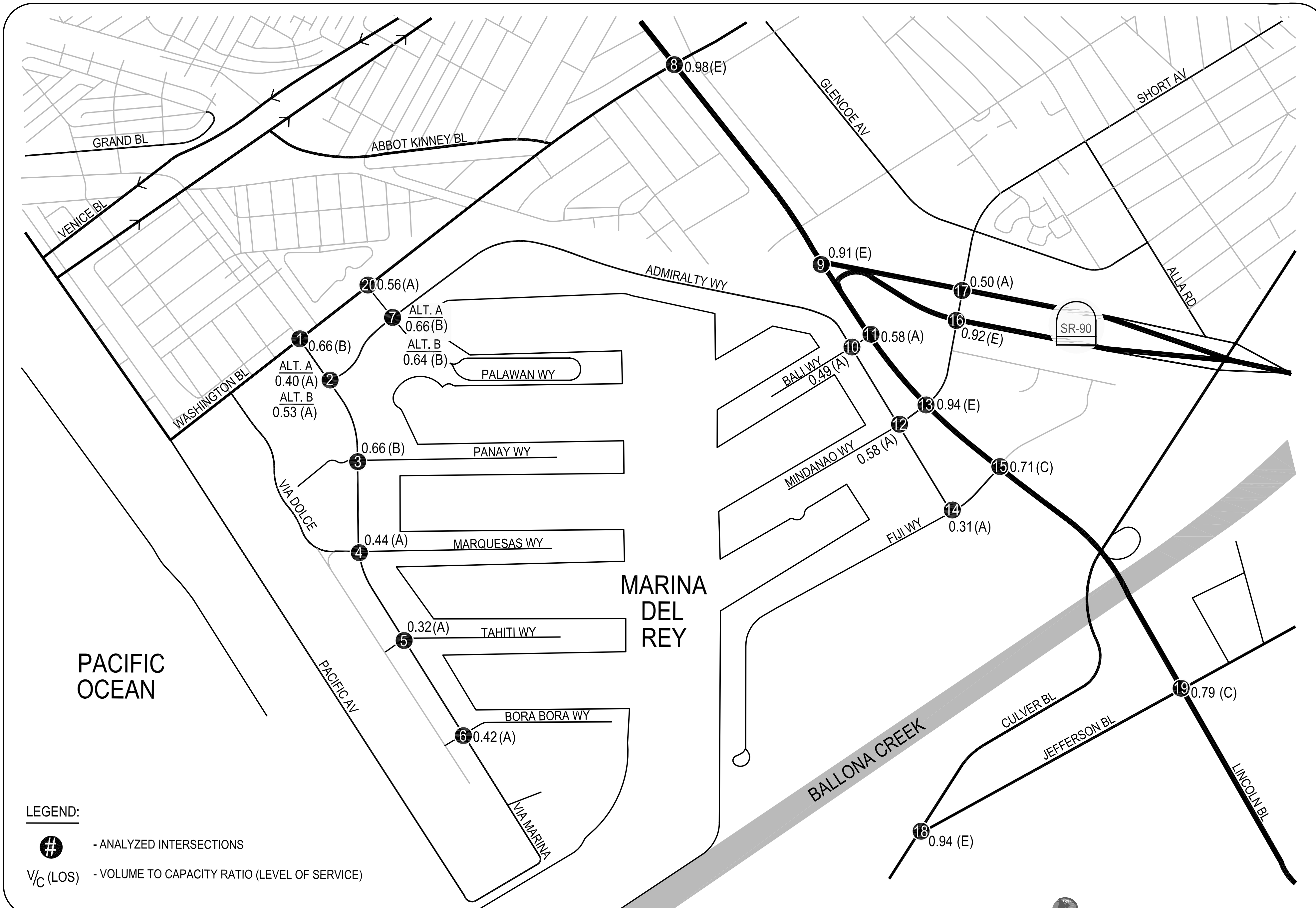


FIGURE 27
CUMULATIVE (2020) WITH PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS) AND IMPROVEMENTS AM PEAK HOUR LEVELS OF SERVICE

RAJU Associates, Inc.

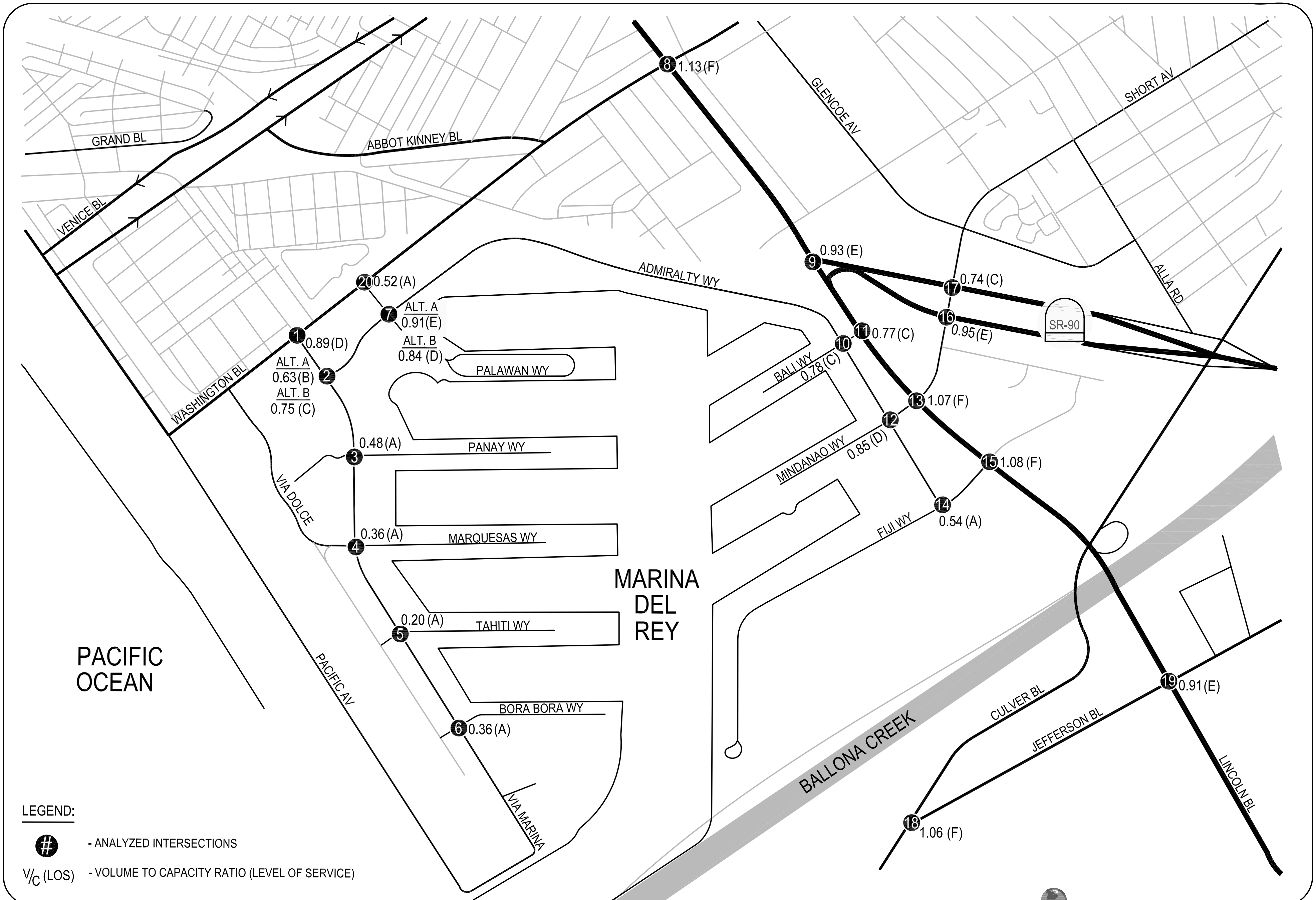


FIGURE 28
CUMULATIVE (2020) WITH PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS) AND IMPROVEMENTS PM PEAK HOUR LEVELS OF SERVICE

RAJU Associates, Inc.

PM Peak Hour

- Palawan Way/Admiralty Way – LOS E
- Lincoln Boulevard/Washington Boulevard – LOS F
- Lincoln Boulevard/Marina Expressway – LOS E
- Lincoln Boulevard/Mindanao Way – LOS F
- Lincoln Boulevard/Fiji Way – LOS F
- Marina Expressway EB/Mindanao Way – LOS E
- Culver Boulevard/Jefferson Boulevard – LOS F
- Lincoln Boulevard/Jefferson Boulevard – LOS E

For the scenario without the Washington Boulevard/Palawan Way intersection improvement, but with all the other transportation improvements within the Marina, the number of intersections that would be operating at LOS D or better would be less than those projected under the conditions with the Washington Boulevard/Palawan Way intersection improvement. In addition to the above locations, the other locations that would be operating at failing levels of service would be:

AM Peak Hour

- Palawan Way/Washington Boulevard – LOS E

PM Peak Hour

- Palawan Way/Washington Boulevard – LOS F
- Via Marina Way/Washington Boulevard – LOS E

COMPARISON OF FUTURE CUMULATIVE (2020) WITH PROPOSED LCP BUILDOUT WITH TRANSPORTATION IMPROVEMENTS TO FUTURE CUMULATIVE (2010) WITH NO MARINA DEVELOPMENT CONDITIONS IN THE 1991/94 DKS STUDY

Table 17 also compares the Future Cumulative (2020) with Proposed LCP Buildout (including Pipeline Projects) with the Revised Set of Intersection Improvement Projects to the Future Cumulative (2010) with no Marina Development conditions from the 1991–1994 DKS Study (since there was no Cumulative scenario with Marina Development in the DKS Study). As indicated, all of the analyzed intersections under Future Cumulative (2020) with LCP Amendment (Pipeline Projects) with the Revised Set of Intersection Improvement Projects are projected to operate at better V/C ratios and levels of service than the Future Cumulative (2010) with no Marina Development conditions in the 1991/94 DKS Study.

VII. SUMMARY OF CONCLUSIONS

This study was undertaken to assess the Marina del Rey Local Coastal Program (LCP) Amendment conditions and provide guidance relative to improvement measures that may be required to alleviate traffic conditions within Marina del Rey. Raju Associates, Inc. performed this detailed study and the following summarizes the results and findings of this analysis:

- The study area for this project is bounded by Washington Boulevard on the north, Jefferson Boulevard on the south, Pacific Ocean on the west and Lincoln Boulevard on the east. These locations fall within the County of Los Angeles and City of Los Angeles. Also included are the intersections of SR 90 and Mindanao Way.

- Current traffic counts were conducted at each of the analysis intersections during both the morning and evening peak hours. A comparison of these counts with those conducted in the 1991-1994 DKS Study indicate that the current traffic counts have decreased overall by 5% and 8% during the morning and evening peak hours, respectively. This implies that the ambient growth projected in the 1991-1994 DKS Study has not occurred in this region.

- Currently, all 20 of the analyzed intersection locations are operating at levels of service (LOS) D or better during the morning and evening peak hours, with 19 of them operating a LOS C or better. Typically, in urban areas, LOS D is considered as acceptable operations. In the 1991-1994 DKS Study, "existing conditions" analysis identified that 3 locations during the morning peak hour and 9 locations during the evening peak hour were operating at congested or failing levels of service (LOS E or F). A comparison between the two indicates that the current operations at all of the analysis locations are equivalent to or better than the base conditions projected in the 1991-1994 DKS Study.

- In the Future Ambient (2020) conditions, all 20 locations in the morning peak hour and 19 of the 20 locations in the evening peak hour are projected to operate at LOS D or better. The remaining intersection is projected to operate at LOS E. The Future Ambient (2020) conditions has been forecast to operate better than the Future Ambient (2010) conditions projected in the 1991-1994 DKS Study during both the morning and evening peak hours at all of the analyzed intersections.

- The Proposed Pipeline Projects' trip generation would result in a total of approximately 1,163 trips (610 inbound, 553 outbound) during the evening peak hour. The Pipeline Projects account for approximately 46% of the overall LCP Buildout remaining (unbuilt) uses' trip generation.

- In the Future Ambient (2020) with LCP Amendment (Pipeline Projects) conditions (without improvements), all 20 of the analyzed intersections in the morning peak hour and 18 of the 20 analyzed intersections in the evening peak hour are projected to operate at LOS D or better. The remaining intersections in the evening peak hour are projected to operate at LOS E. The Future Ambient (2020) with LCP Amendment conditions have been forecast to operate better than the Future Ambient (2010) conditions projected in the 1991–1994 DKS Study during both the morning and evening peak hours at all of the analyzed intersections.

- The LCP Amendment includes changes to the transportation improvement measures within the Marina del Rey area. Specific intersection improvement updates have been investigated, in addition to or in lieu of the Category 1 (internal Marina) improvements in the approved LCP. Alternate additional improvement measures have also been developed at several intersections in order to provide improved operating conditions.

- A description of the improvements, known as the Revised Set of Intersection Improvement Projects is provided below.

1. <u>Via Marina/Admiralty Way Intersection Improvement Alternatives</u>
   a. Alternative A - The improvement at this intersection includes a third westbound left-turn lane and a second southbound left-turn lane. The westbound approach would provide three left-turn lanes and two right-turn lanes. The southbound approach would provide dual left-turn lanes and two through lanes.
   b. Alternative B - Realign this intersection to make Admiralty Way and Via Marina Way roadway segment south of Admiralty to become east-west roadways and make Via Marina Way north of Admiralty Way to "Tee" intersect into this roadway. The westbound Admiralty Way roadway would have two through lanes and a separate right-turn lane. The eastbound re-aligned Via Marina roadway would provide two through lanes and dual left-turn lanes. The re-aligned Via Marina Way southbound approach would provide dual left-turn lanes and a separate right-turn lane.

Replace the Admiralty Way 5-lane corridor improvement and Admiralty Way/Fiji Way intersection improvement recommended as part of the Local Coastal Program (LCP) with key intersection improvements (described below) that achieve similar improved operating results.

2. <u>Palawan Way/Admiralty Way Intersection Improvement Alternatives</u>
   a. Alternative A - The southbound approach at this intersection will be restriped to provide a left-turn lane, a shared left-through lane and a separate right-turn lane. The northbound approach would be restriped to provide a shared left-through lane and a shared through-right turn lane. A third through lane would be provided in the westbound direction. The westbound approach would provide a left-turn lane, two through lanes and a shared through-right lane. The north-south signal phasing would operate as a split phase due to the lane configurations.
   b. Alternative B - Provide an additional lane by restriping the southbound approach. The southbound approach would provide dual left-turn lanes, one through lane

and a separate right-turn lane. The northbound approach would be restriped to provide a shared left-through lane and a separate right-turn lane. A third through lane would be provided in the westbound direction. The westbound approach would provide a left-turn lane, two through lanes and a shared through-right lane. The north-south signal phasing would operate as a split phase due to the lane configurations.

3. Admiralty Way□Bali Way - The improvement at this intersection includes a second southbound left-turn lane. The southbound approach would provide dual left-turn lanes, one through lane, and a shared through-right lane.

4. Admiralty Way□Mindanao Way - The improvement at this intersection includes a second southbound left-turn lane and an additional lane on the eastbound approach. The southbound approach would provide dual left-turn lanes, one through lane, and a shared through-right lane. The eastbound approach would provide a left-turn lane, a shared left-through lane and a shared through-right lane. The improvement also includes restriping the westbound approach to provide a left-turn lane, a shared left-through-right lane, and a separate right-turn lane. The east-west signal phase would operate as a split phase due to the lane configurations.

- In the Future Ambient (2020) with LCP Amendment conditions (with the Revised Set of Intersection Improvement Projects), all 20 of the analyzed intersections in the morning peak hour and 19 of the 20 analyzed intersections in the evening peak hour are projected to operate at LOS D or better. The remaining intersection (Culver Boulevard at Jefferson Boulevard) is projected to continue to operate at LOS E in the evening peak hour. The Future Ambient (2020) with LCP Amendment and the Revised Set of Intersection Improvement Projects have been forecast to operate better than the Future Ambient conditions projected in the 1991□1994 DKS Study during both the morning and evening peak hours at all of the analyzed intersections.

- The proposed overall LCP Buildout including the Pipeline Projects Amendment would generate slightly less than the amount of trips generated by the LCP uses approved but not built yet, from the 1991□94 DKS Study, during the evening peak hour. The Proposed LCP Buildout trip generation would result in a total of approximately 2,503 trips (1,378 inbound, 1,125 outbound) during the evening peak hour. This is equivalent to approximately 91□ of the approved PM peak hour trips in the LCP.

- In the Future Ambient (2020) with proposed LCP Buildout (including Pipeline Projects prior to any of the improvements) conditions, all 20 of the analyzed intersections in the morning peak hour and 10 of the 20 analyzed intersections in the evening peak hour are projected to operate at LOS D or better. The remaining intersections in the evening peak hour are projected to operate at LOS E or F. The Future Ambient (2020) with LCP Buildout conditions has been forecast to operate better than the Future Ambient (2010) plus approved LCP conditions projected in the 1991□1994 DKS Study during both the morning and evening peak hours at all of the analyzed intersections.

- In the Future Ambient (2020) with LCP Buildout conditions (with the Revised Set of Intersection Improvement Projects), all 20 of the analyzed intersections in the morning peak hour and 15 of the 20 analyzed intersections in the evening peak hour are projected to operate at LOS D or better. The Future Ambient (2020) with LCP Buildout and the

Revised Set of Intersection Improvement Projects have been forecast to operate better than the Future Ambient plus approved LCP and mitigations conditions projected in the 1991–1994 DKS Study during both the morning and evening peak hours at all of the analyzed intersections.

- A cumulative analysis of future 2020 conditions with all related projects was performed and compared to the cumulative analysis conditions in the 1991–1994 DKS Study. In the Cumulative (2020) conditions, 18 and 17 of the 20 analyzed intersections are projected to operate at LOS D or better during the morning and evening peak hours, respectively. The remaining intersections are projected to operate at LOS E or F. The Cumulative (2020) conditions have been forecast to operate better than the Cumulative (2010) conditions (with no Marina development) projected in the 1991–1994 DKS Study during both the morning and evening peak hours at all of the analyzed intersections.

- In the Future (2020) Cumulative with LCP Amendment (Pipeline Projects) conditions, 18 and 13 of the 20 analyzed intersections would be operating at acceptable levels of service (LOS D or better) during the morning and evening peak hours, respectively. The Cumulative (2020) with LCP Amendment conditions have been forecast to operate better than the Cumulative (2010) conditions (with no Marina development) projected in the 1991–1994 DKS Study during both the morning and evening peak hours at all of the analyzed intersections.

- In the Future (2020) Cumulative with LCP Amendment (Pipeline Projects) conditions (with the Revised Set of Intersection Improvement Projects), 18 and 15 of the 20 analyzed intersections would be operating at acceptable levels of service (LOS D or better) during the morning and evening peak hours, respectively. The Cumulative (2020) with LCP Amendment and the Revised Set of Intersection Improvement Projects have been forecast to operate better than the Cumulative (2010) conditions (with no Marina development) projected in the 1991–1994 DKS Study during both the morning and evening peak hours at all of the analyzed intersections.

- In the Future (2020) Cumulative with Proposed LCP Buildout (including Pipeline Projects) conditions, 14 and 8 of the 20 analyzed intersections would be operating at acceptable levels of service (LOS D or better) during the morning and evening peak hours, respectively. Again, the Cumulative (2020) with LCP Buildout conditions have been forecast to operate better than the Cumulative (2010) conditions (with no Marina development) projected in the 1991–1994 DKS Study during both the morning and evening peak hours at all of the analyzed intersections.

- In the Future (2020) Cumulative with LCP Buildout conditions (with the Revised Set of Intersection Improvement Projects), 15 and 12 of the 20 analyzed intersections would be operating at acceptable levels of service (LOS D or better) during the morning and evening peak hours, respectively. Again, the Cumulative (2020) with LCP Buildout and the Revised Set of Intersection Improvement Projects have been forecast to operate better than the Cumulative (2010) conditions (with no Marina development) projected in the 1991–1994 DKS Study during both the morning and evening peak hours at all of the analyzed intersections.

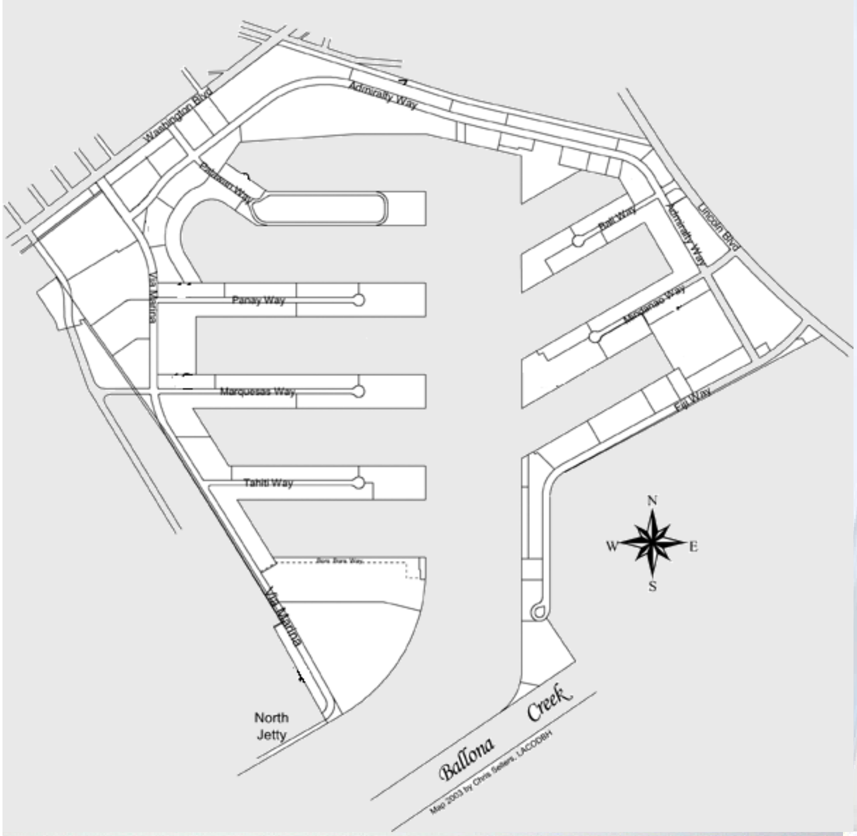
- In summary, the proposed LCP Amendment (with Pipeline Projects) as well as the proposed LCP Buildout traffic conditions with the Revised Set of Intersection Improvement

Projects would result in better operating conditions at all analysis locations than the future conditions with the approved LCP in the 1991–1994 DKS Study. Accordingly, the Revised Set of Intersection Improvement Projects would provide sufficient capacity for the five Pipeline Projects and for the proposed LCP buildout traffic conditions. Further, the Future Cumulative (2020) with both the proposed Amendment and proposed Buildout conditions are also projected to operate better than the Future Cumulative (2010) conditions (with no Marina development) projected in the 1991–1994 DKS Study.

- As part of this LCP Amendment, the number of development zones is proposed to be reduced to three major development zones within the Marina del Rey Local Coastal Plan area. This reduction of the number of development zones to three does not cause any substantial change in traffic operating conditions described for any of the scenarios summarized above.

FINAL DRAFT
TRAFFIC STUDY
FOR THE MARINA DEL REY
LOCAL COASTAL PROGRAM AMENDMENT

VOLUME II - APPENDICES



Prepared for:

Los Angeles County Department of Beaches & Harbors

Los Angeles County Department of Regional Planning

April 29, 2010

Submitted by :

RAJU Associates Inc

VOLUME II - APPENDICES

A INTERSECTION LANE CONFIGURATIONS

B TRAFFIC COUNTS

C EXISTING (2009) CONDITIONS TRAFFIC VOLUMES AND LEVEL OF SERVICE WORKSHEETS

D FUTURE (2020) WITH AMBIENT GROWTH CONDITIONS TRAFFIC VOLUMES AND LEVEL OF SERVICE WORKSHEETS

E APPROVED LCP DEVELOPMENT AND PROPOSED LCP AMENDMENT DEVELOPMENT INFORMATION

F AMBIENT (2020) CONDITIONS WITH PIPELINE PROJECTS TRAFFIC VOLUMES AND LEVEL OF SERVICE WORKSHEETS

G AMBIENT (2020) CONDITIONS WITH PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS) TRAFFIC VOLUMES AND LEVEL OF SERVICE WORKSHEETS

H RELATED PROJECTS INFORMATION

I CUMULATIVE (2020) CONDITIONS TRAFFIC VOLUMES AND LEVEL OF SERVICE WORKSHEETS

J CUMULATIVE (2020) CONDITIONS WITH PIPELINE PROJECTS TRAFFIC VOLUMES AND LEVEL OF SERVICE WORKSHEETS

K CUMULATIVE (2020) CONDITIONS WITH PROPOSED LCP BUILDOUT(INCLUDING PIPELINE PROJECTS)TRAFFIC VOLUMES AND LEVEL OF SERVICE WORKSHEETS

L TRANSPORTATION MITIGATION PROGRAM IN THE APPROVED LCP

M AMBIENT (2020) CONDITIONS WITH PIPELINE PROJECTS AND IMPROVEMENTS TRAFFIC VOLUMES AND LEVEL OF SERVICE WORKSHEETS

N AMBIENT (2020) CONDITIONS WITH PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS) AND IMPROVEMENTS TRAFFIC VOLUMES AND LEVEL OF SERVICE WORKSHEETS

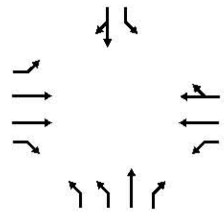
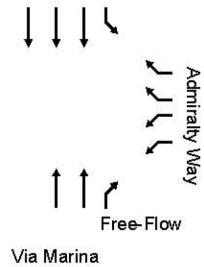
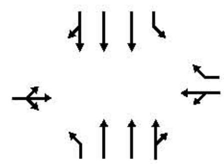
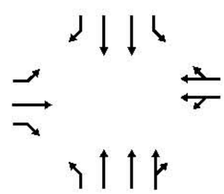
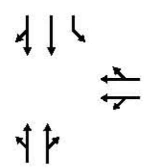
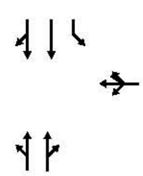
O CUMULATIVE (2020) CONDITIONS WITH PIPELINE PROJECTS AND IMPROVEMENTS TRAFFIC VOLUMES AND LEVEL OF SERVICE WORKSHEETS

P CUMULATIVE (2020) CONDITIONS WITH PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS) AND IMPROVEMENTS TRAFFIC VOLUMES AND LEVEL OF SERVICE WORKSHEETS

APPENDIX A

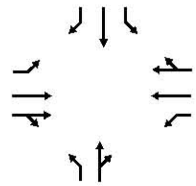
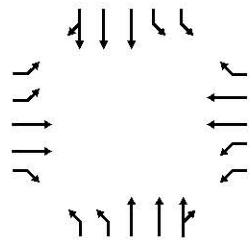
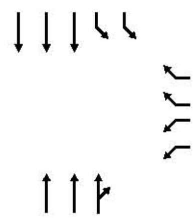
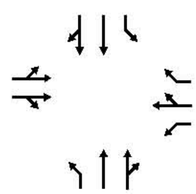
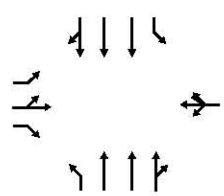
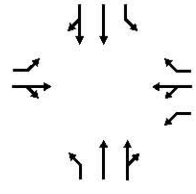
Intersection Lane Configurations

APPENDIX A
SUMMARY OF INTERSECTION LANE GEOMETRY - EXISTING CONDITIONS

	STREET	EXISTING (2009) CONDITIONS [1]
1	N/S: Via Marina-Ocean Av E/W: Washington Bl (Traffic Signal)	
2	N/S: Via Marina E/W: Admiralty Wy (Traffic Signal)	
3	N/S: Via Marina E/W: Panay Wy (Traffic Signal)	
4	N/S: Via Marina E/W: Marquesas Wy (Traffic Signal)	
5	N/S: Via Marina E/W: Tahiti Wy (Traffic Signal)	
6	N/S: Via Marina E/W: Bora Bora Wy (Stop-Controlled on minor approach)	

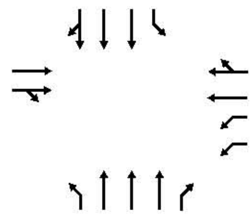
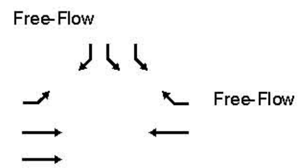
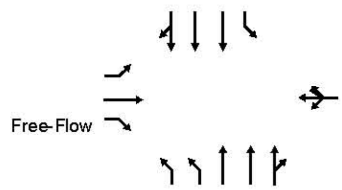
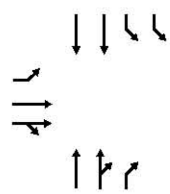
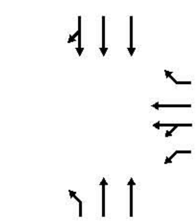
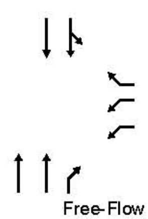
[1] All signalized intersections include ATSAC and ATCS credit of 0.10 for the 'Existing Conditions' scenario.

APPENDIX A
SUMMARY OF INTERSECTION LANE GEOMETRY - EXISTING CONDITIONS

	STREET	EXISTING (2009) CONDITIONS [1]
7	N/S: Palawan Wy E/W: Admiralty Wy (Traffic Signal)	
8	N/S: Lincoln Bl E/W: Washington Bl (Traffic Signal)	
9	N/S: Lincoln Bl E/W: SR-90 On/Off Ramps (Traffic Signal)	
10	N/S: Admiralty Wy E/W: Bali Wy (Traffic Signal)	
11	N/S: Lincoln Bl E/W: Bali Wy (Traffic Signal)	
12	N/S: Admiralty Wy E/W: Mindanao Wy (Traffic Signal)	

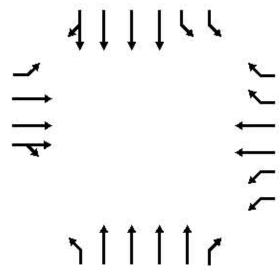
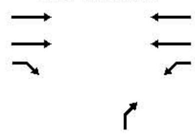
[1] All signalized intersections include ATSAC and ATCS credit of 0.10 for the 'Existing Conditions' scenario.

APPENDIX A
SUMMARY OF INTERSECTION LANE GEOMETRY - EXISTING CONDITIONS

STREET	EXISTING (2009) CONDITIONS [1]
13 N/S: Lincoln Bl E/W: Mindanao Wy (Traffic Signal)	
14 N/S: Admiralty Wy E/W: Fiji Wy (Traffic Signal)	
15 N/S: Lincoln Bl E/W: Fiji Wy (Traffic Signal)	
16 N/S: Mindanao Wy E/W: Marina Expressway (SR-90) East (Traffic Signal)	
17 N/S: Mindanao Wy E/W: Marina Expressway (SR-90) West (Traffic Signal)	
18 N/S: Culver Bl E/W: Jefferson Bl (Traffic Signal)	

[1] All signalized intersections include ATSAC and ATCS credit of 0.10 for the 'Existing Conditions' scenario.

APPENDIX A
SUMMARY OF INTERSECTION LANE GEOMETRY - EXISTING CONDITIONS

	STREET	EXISTING (2009) CONDITIONS [1]
19	N/S: Lincoln Bl E/W: Jefferson Bl (Traffic Signal)	
20	N/S: Palawan Way E/W: Washington Bl	Stop-controlled 

[1] All signalized intersections include ATSAC and ATCS credit of 0.10 for the 'Existing Conditions' scenario.

APPENDIX B

Traffic Counts

Intersection Turning Movement

Prepared by:

National Data □Surveying Services

N-S STREET: Via Marina | DATE: 5/28/2009 | LOCATION: City of Marina Del Rey

E-W STREET: Washington Blvd | DAY: THURSDAY | PROJECT□ 09-5215-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	1	1	1	1	0	1	2	0	1	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	74	64	60	7	12	2	2	68	35	12	46	4	386
7:15 AM	85	75	62	9	21	3	6	79	28	17	55	7	447
7:30 AM	110	88	82	8	23	3	11	114	32	24	99	6	600
7:45 AM	97	94	76	13	32	3	11	129	51	24	84	11	625
8:00 AM	79	103	112	12	20	6	11	153	53	31	97	10	687
8:15 AM	97	88	90	8	34	5	12	112	42	27	83	11	609
8:30 AM	87	92	66	10	29	5	13	131	64	27	84	6	614
8:45 AM	105	83	74	15	40	4	10	146	45	30	94	14	660
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES □	734	687	622	82	211	31	76	932	350	192	642	69	4628

AM Peak Hr Begins at: 800 AM

PEAK VOLUMES □	368	366	342	45	123	20	46	542	204	115	358	41	2570
PEAK HR. FACTOR:		0.915			0.797			0.912			0.931		0.935

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data □Surveying Services

N-S STREET: Via Marina　　DATE: 5/28/2009　　LOCATION: City of Marina Del Rey

E-W STREET: Washington Blvd　　DAY: THURSDAY　　PROJECT□ 09-5215-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	1	1	1	1	0	1	2	0	1	2	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	70	55	43	27	77	10	7	123	82	36	128	9	667
4:15 PM	81	53	49	28	100	4	8	134	83	40	110	7	697
4:30 PM	90	51	49	29	101	12	5	127	87	34	130	14	729
4:45 PM	88	63	49	32	119	6	3	131	94	34	141	10	770
5:00 PM	99	57	64	26	99	9	12	130	96	36	128	5	761
5:15 PM	107	62	47	18	136	6	4	143	92	34	129	8	786
5:30 PM	108	76	71	24	113	8	10	133	94	42	144	8	831
5:45 PM	89	56	49	32	105	11	5	142	81	42	137	10	759
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL VOLUMES □	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	732	473	421	216	850	66	54	1063	709	298	1047	71	6000

PM Peak Hr Begins at: 445 PM

PEAK VOLUMES □	402	258	231	100	467	29	29	537	376	146	542	31	3148
PEAK HR. FACTOR:		0.874			0.931			0.985			0.927		0.947

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data ☐Surveying Services

N-S STREET: Via Marina DATE: 5/28/2009 LOCATION: City of Marina Del Rey

E-W STREET: Admiralty Way DAY: THURSDAY PROJECT☐ 09-5215-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	1	1	2	0	0	0	0	2	0	2	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM		78	139	37	26					35		72	387
7:15 AM		83	146	42	29					68		143	511
7:30 AM		115	166	50	31					70		177	609
7:45 AM		106	175	68	48					76		186	659
8:00 AM		162	182	66	39					74		147	670
8:15 AM		109	192	90	45					82		154	672
8:30 AM		110	165	106	51					90		187	709
8:45 AM		110	202	77	64					90		187	730
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL VOLUMES ☐	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	873	1367	536	333	0	0	0	0	585	0	1253	4947

AM Peak Hr Begins at: 800 AM

PEAK VOLUMES ☐	0	491	741	339	199	0	0	0	0	336	0	675	2781
PEAK HR. FACTOR:		0.895			0.857			0.000			0.912		0.952

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data ☐Surveying Services

N-S STREET: Via Marina | DATE: 5/28/2009 | LOCATION: City of Marina Del Rey

E-W STREET: Admiralty Way | DAY: THURSDAY | PROJECT☐ 09-5215-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	1	1	2	0	0	0	0	2	0	2	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM		69	107	107	66					99		97	545
4:15 PM		76	125	145	87					170		136	739
4:30 PM		63	161	138	78					184		138	762
4:45 PM		55	139	161	91					196		149	791
5:00 PM		88	149	135	79					206		128	785
5:15 PM		69	142	166	94					241		155	867
5:30 PM		104	147	154	100					198		147	850
5:45 PM		70	131	135	91					213		131	771
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL VOLUMES ☐	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	594	1101	1141	686	0	0	0	0	1507	0	1081	6110

PM Peak Hr Begins at: 445 PM

PEAK VOLUMES ☐	0	316	577	616	364	0	0	0	0	841	0	579	3293
PEAK HR. FACTOR:		0.889			0.942			0.000			0.896		0.950

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data ☐ Surveying Services

N-S STREET: Via Marina | DATE: 5/28/2009 | LOCATION: City of Marina Del Rey

E-W STREET: Panay Way | DAY: THURSDAY | PROJECT☐ 09-5215-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	1	3	0	0	1	0	0	1	1	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	0	144	2	17	42	6	23	0	0	1	1	42	278
7:15 AM	0	173	1	18	58	4	28	0	1	1	1	29	314
7:30 AM	0	197	4	21	78	4	26	0	0	3	0	40	373
7:45 AM	1	207	3	34	75	3	32	0	1	3	0	36	395
8:00 AM	0	237	5	19	85	6	31	1	0	3	0	51	438
8:15 AM	0	226	5	27	75	4	31	0	1	3	0	37	409
8:30 AM	0	201	9	29	85	6	29	0	0	3	0	38	400
8:45 AM	0	220	3	41	101	7	28	0	1	10	0	44	455
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES ☐	1	1605	32	206	599	40	228	1	4	27	2	317	3062

AM Peak Hr Begins at: 800 AM

PEAK VOLUMES ☐	0	884	22	116	346	23	119	1	2	19	0	170	1702
PEAK HR. FACTOR:		0.936			0.814			0.953			0.875		0.935

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data ☐Surveying Services

N-S STREET: Via Marina　　DATE: 5/28/2009　　LOCATION: City of Marina Del Rey

E-W STREET: Panay Way　　DAY: THURSDAY　　PROJECT☐ 09-5215-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	1	3	0	0	1	0	0	1	1	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	0	163	6	43	166	12	14	0	0	2	0	44	450
4:15 PM	1	130	7	54	196	12	11	0	1	6	1	27	446
4:30 PM	0	147	5	47	208	9	12	1	0	3	1	38	471
4:45 PM	0	125	7	54	203	15	13	0	0	3	0	35	455
5:00 PM	0	165	6	42	169	14	14	0	0	2	0	42	454
5:15 PM	0	136	8	56	185	9	11	1	1	6	1	30	444
5:30 PM	0	143	5	48	199	10	11	1	0	2	2	38	459
5:45 PM	0	126	7	53	198	16	13	0	0	3	0	36	452
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL VOLUMES ☐	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	1135	51	397	1524	97	99	3	2	27	5	290	3631

PM Peak Hr Begins at: 415 PM

PEAK VOLUMES ☐	1	567	25	197	776	50	50	1	1	14	2	142	1826
PEAK HR. FACTOR:		0.867			0.940			0.929			0.898		0.969

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data Surveying Services

N-S STREET: Via Marina | DATE: 5/28/2009 | LOCATION: City of Marina Del Rey

E-W STREET: Marquesas Way | DAY: THURSDAY | PROJECT 09-5215-004

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	1	2	1	1	1	1	1	1	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	6	108	1	8	27	7	20	0	0	0	2	25	204
7:15 AM	9	108	0	8	49	4	21	2	0	1	6	27	235
7:30 AM	7	147	0	9	56	12	21	0	4	1	5	34	296
7:45 AM	10	146	0	12	58	7	27	1	4	1	6	39	311
8:00 AM	11	177	0	15	68	8	29	5	0	1	0	41	355
8:15 AM	8	164	1	19	55	13	23	2	3	1	2	23	314
8:30 AM	10	145	2	18	58	10	31	1	4	0	7	36	322
8:45 AM	11	168	4	13	83	11	23	1	5	0	6	26	351
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL VOLUMES	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	72	1163	8	102	454	72	195	12	20	5	34	251	2388

AM Peak Hr Begins at: 800 AM

PEAK VOLUMES	40	654	7	65	264	42	106	9	12	2	15	126	1342
PEAK HR. FACTOR:		0.932			0.867			0.882			0.831		0.945

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data ☐Surveying Services

N-S STREET:	Via Marina	DATE:	5/28/2009	LOCATION:	City of Marina Del Rey
E-W STREET:	Marquesas Way	DAY:	THURSDAY	PROJECT☐	09-5215-004

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	1	2	1	1	1	1	1	1	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	4	82	1	17	93	10	23	2	11	0	1	15	259
4:15 PM	3	109	4	24	140	22	13	3	9	3	3	17	350
4:30 PM	6	120	4	31	114	17	28	4	11	1	0	16	352
4:45 PM	6	99	3	28	128	14	21	7	12	0	2	25	345
5:00 PM	1	121	1	21	125	18	15	3	7	2	1	17	332
5:15 PM	2	86	2	30	158	21	28	4	6	2	2	23	364
5:30 PM	4	94	4	34	131	20	16	4	11	0	1	10	329
5:45 PM	2	89	3	33	160	14	17	3	12	2	2	24	361
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES ☐	28	800	22	218	1049	136	161	30	79	10	12	147	2692

PM Peak Hr Begins at: 430 PM

PEAK VOLUMES ☐	15	426	10	110	525	70	92	18	36	5	5	81	1393
PEAK HR. FACTOR:		0.867			0.843			0.849			0.843		0.957

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data ☐Surveying Services

N-S STREET: Via Marina DATE: 5/28/2009 LOCATION: City of Marina Del Rey

E-W STREET: Tahiti Way DAY: THURSDAY PROJECT☐ 09-5215-005

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	1	2	0	0	0	0	0	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	0	91	0	6	22	1				0	0	20	140
7:15 AM	1	104	0	14	38	5				1	0	22	185
7:30 AM	1	133	3	17	45	3				1	1	34	238
7:45 AM	0	128	1	26	28	4				1	0	29	217
8:00 AM	2	144	1	23	44	4				8	0	42	268
8:15 AM	0	143	1	14	37	1				6	0	40	242
8:30 AM	0	120	1	23	37	2				2	1	33	219
8:45 AM	4	157	2	22	67	4				3	1	37	297
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL VOLUMES ☐	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	8	1020	9	145	318	24	0	0	0	22	3	257	1806

AM Peak Hr Begins at: 800 AM

PEAK VOLUMES ☐	6	564	5	82	185	11	0	0	0	19	2	152	1026
PEAK HR. FACTOR:		0.882			0.747			0.000			0.865		0.864

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data ☐Surveying Services

N-S STREET: Via Marina   DATE: 5/28/2009   LOCATION: City of Marina Del Rey

E-W STREET: Tahiti Way   DAY: THURSDAY   PROJECT☐ 09-5215-005

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	1	2	0	0	0	0	0	2	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	0	65	5	24	65	7				3	0	17	186
4:15 PM	1	88	4	31	107	3				1	1	16	252
4:30 PM	3	102	3	23	107	3				0	0	24	265
4:45 PM	0	76	2	33	93	4				0	0	19	227
5:00 PM	1	95	4	26	100	4				2	0	30	262
5:15 PM	0	71	2	33	111	10				1	0	17	245
5:30 PM	1	90	1	30	122	5				0	0	23	272
5:45 PM	0	79	4	34	105	4				3	0	14	243
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES ☐	6	666	25	234	810	40	0	0	0	10	1	160	1952

PM Peak Hr Begins at: 500 PM

PEAK VOLUMES ☐	2	335	11	123	438	23	0	0	0	6	0	84	1022
PEAK HR. FACTOR:		0.870			0.930			0.000			0.703		0.939

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data ☐ Surveying Services

N-S STREET: Via Marina | DATE: 5/28/2009 | LOCATION: City of Marina Del Rey

E-W STREET: Tahiti Way | DAY: THURSDAY | PROJECT☐ 09-5215-005

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	1	2	0	0	0	0	0	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	0	91	0	6	22	1				0	0	20	140
7:15 AM	1	104	0	14	38	5				1	0	22	185
7:30 AM	1	133	3	17	45	3				1	1	34	238
7:45 AM	0	128	1	26	28	4				1	0	29	217
8:00 AM	2	144	1	23	44	4				8	0	42	268
8:15 AM	0	143	1	14	37	1				6	0	40	242
8:30 AM	0	120	1	23	37	2				2	1	33	219
8:45 AM	4	157	2	22	67	4				3	1	37	297
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES ☐	8	1020	9	145	318	24	0	0	0	22	3	257	1806

AM Peak Hr Begins at: 800 AM

PEAK VOLUMES ☐	6	564	5	82	185	11	0	0	0	19	2	152	1026
PEAK HR. FACTOR:		0.882			0.747			0.000			0.865		0.864

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data □ Surveying Services

N-S STREET: Via Marina | DATE: 5/28/2009 | LOCATION: City of Marina Del Rey

E-W STREET: Tahiti Way | DAY: THURSDAY | PROJECT□ 09-5215-005

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	1	2	0	0	0	0	0	2	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	0	65	5	24	65	7				3	0	17	186
4:15 PM	1	88	4	31	107	3				1	1	16	252
4:30 PM	3	102	3	23	107	3				0	0	24	265
4:45 PM	0	76	2	33	93	4				0	0	19	227
5:00 PM	1	95	4	26	100	4				2	0	30	262
5:15 PM	0	71	2	33	111	10				1	0	17	245
5:30 PM	1	90	1	30	122	5				0	0	23	272
5:45 PM	0	79	4	34	105	4				3	0	14	243
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL VOLUMES □	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	6	666	25	234	810	40	0	0	0	10	1	160	1952

PM Peak Hr Begins at: 500 PM

PEAK VOLUMES □	2	335	11	123	438	23	0	0	0	6	0	84	1022
PEAK HR. FACTOR:		0.870			0.930			0.000			0.703		0.939

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data □ Surveying Services

N-S STREET: Palawan Way DATE: 5/28/2009 LOCATION: City of Marina Del Rey

E-W STREET: Admiralty Way DAY: THURSDAY PROJECT□ 09-5215-007

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	1	1	2	0	1	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	5	15	9	21	3	10	12	156	1	4	109	7	352
7:15 AM	4	10	6	14	5	9	15	186	5	9	185	11	459
7:30 AM	5	9	7	20	3	12	26	173	1	4	207	14	481
7:45 AM	8	13	11	31	11	19	15	208	2	4	207	11	540
8:00 AM	1	12	7	28	7	12	25	183	2	9	178	15	479
8:15 AM	7	17	9	34	7	23	27	226	5	9	185	11	560
8:30 AM	7	11	12	30	5	22	15	228	5	7	203	22	567
8:45 AM	4	22	8	37	8	18	16	237	4	3	230	22	609
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES □	41	109	69	215	49	125	151	1597	25	49	1504	113	4047

AM Peak Hr Begins at: 800 AM

PEAK VOLUMES □	19	62	36	129	27	75	83	874	16	28	796	70	2215
PEAK HR. FACTOR:		0.860			0.902			0.943			0.876		0.909

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data ☐Surveying Services

N-S STREET: Palawan Way　　DATE: 5/28/2009　　LOCATION: City of Marina Del Rey

E-W STREET: Admiralty Way　　DAY: THURSDAY　　PROJECT☐ 09-5215-007

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	1	1	2	0	1	2	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	5	8	12	78	10	19	10	203	6	22	206	17	596
4:15 PM	7	4	14	70	17	37	12	246	8	19	248	18	700
4:30 PM	4	5	14	53	22	22	17	282	12	26	262	31	750
4:45 PM	7	8	12	70	22	49	12	252	11	34	285	36	798
5:00 PM	5	10	20	81	15	39	24	281	6	27	268	24	800
5:15 PM	12	13	14	86	32	34	8	273	8	22	331	28	861
5:30 PM	5	11	11	79	19	58	26	266	2	20	322	29	848
5:45 PM	6	9	6	79	12	60	11	242	4	22	314	31	796
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES ☐	51	68	103	596	149	318	120	2045	57	192	2236	214	6149

PM Peak Hr Begins at: 445 PM

PEAK VOLUMES ☐	29	42	57	316	88	180	70	1072	27	103	1206	117	3307
PEAK HR. FACTOR:		0.821			0.936			0.940			0.936		0.960

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data □ Surveying Services

N-S STREET: Lincoln Blvd | DATE: 5/26/2009 | LOCATION: City of Marina Del Rey

E-W STREET: Washington Blvd | DAY: TUESDAY | PROJECT□ 09-5215-008

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	3	0	2	3	0	2	3	0	2	3	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	154	390	40	44	254	28	31	241	147	23	139	50	1541
7:15 AM	115	433	33	34	180	19	19	113	76	20	117	40	1199
7:30 AM	113	447	37	53	257	26	26	126	94	25	122	59	1385
7:45 AM	122	383	45	48	228	21	28	167	99	20	163	56	1380
8:00 AM	114	367	34	47	222	18	34	175	100	33	140	50	1334
8:15 AM	121	373	40	57	277	35	30	185	93	36	122	50	1419
8:30 AM	115	355	42	44	276	31	53	183	91	48	135	50	1423
8:45 AM	141	435	47	64	278	36	28	183	118	36	149	49	1564
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES □	995	3183	318	391	1972	214	249	1373	818	241	1087	404	11245

AM Peak Hr Begins at: 800 AM

PEAK VOLUMES □	491	1530	163	212	1053	120	145	726	402	153	546	199	5740
PEAK HR. FACTOR:		0.876			0.916			0.967			0.959		0.918

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data ☐Surveying Services

N-S STREET: Lincoln Blvd

DATE: 5/26/2009

LOCATION: City of Marina Del Rey

E-W STREET: Washington Blvd

DAY: TUESDAY

PROJECT☐ 09-5215-008

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	3	0	2	3	0	2	3	0	2	3	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	98	342	46	76	302	17	21	166	111	79	163	52	1473
4:15 PM	103	366	56	80	331	38	36	166	114	72	149	74	1585
4:30 PM	91	312	73	62	322	33	28	188	121	72	173	66	1541
4:45 PM	121	384	61	68	307	36	32	158	106	70	176	76	1595
5:00 PM	106	330	66	61	302	29	25	145	93	60	186	82	1485
5:15 PM	104	373	60	57	362	35	29	184	119	57	183	62	1625
5:30 PM	116	359	56	60	352	40	31	181	124	56	196	70	1641
5:45 PM	124	333	55	62	315	56	31	169	141	70	218	82	1656
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES ☐	863	2799	473	526	2593	284	233	1357	929	536	1444	564	12601

PM Peak Hr Begins at: 500 PM

PEAK VOLUMES ☐	450	1395	237	240	1331	160	116	679	477	243	783	296	6407
PEAK HR. FACTOR:		0.969			0.953			0.933			0.893		0.967

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data ☐Surveying Services

N-S STREET: Lincoln Blvd | DATE: 5/26/2009 | LOCATION: City of Marina Del Rey

E-W STREET: Marina Expressway (SR-90) | DAY: TUESDAY | PROJECT☐ 09-5215-009

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	3	1	2	3	0	0	0	0	2	0	2	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM		346	38	130	152					11		162	839
7:15 AM		408	37	146	186					39		151	967
7:30 AM		436	46	174	238					27		173	1094
7:45 AM		451	46	181	281					22		184	1165
8:00 AM		402	38	185	280					35		137	1077
8:15 AM		441	51	206	287					26		196	1207
8:30 AM		433	41	178	311					36		176	1175
8:45 AM		445	36	210	336					42		243	1312
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES ☐	0	3362	333	1410	2071	0	0	0	0	238	0	1422	8836

AM Peak Hr Begins at: 800 AM

PEAK VOLUMES ☐	0	1721	166	779	1214	0	0	0	0	139	0	752	4771
PEAK HR. FACTOR:		0.959			0.913			0.000			0.782		0.909

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data ☐Surveying Services

N-S STREET: Lincoln Blvd DATE: 5/26/2009 LOCATION: City of Marina Del Rey

E-W STREET: Marina Expressway (SR-90) DAY: TUESDAY PROJECT☐ 09-5215-009

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	3	1	2	3	0	0	0	0	2	0	2	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM		412	46	153	389					44		187	1231
4:15 PM		388	50	176	408					26		166	1214
4:30 PM		383	52	170	402					41		191	1239
4:45 PM		355	49	200	365					41		224	1234
5:00 PM		376	74	178	379					39		201	1247
5:15 PM		358	48	204	416					31		228	1285
5:30 PM		381	39	220	417					30		233	1320
5:45 PM		387	39	177	376					55		203	1237
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES ☐	0	3040	397	1478	3152	0	0	0	0	307	0	1633	10007

PM Peak Hr Begins at: 500 PM

PEAK VOLUMES ☐	0	1502	200	779	1588	0	0	0	0	155	0	865	5089
PEAK HR. FACTOR:		0.946			0.929			0.000			0.970		0.964

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data □Surveying Services

N-S STREET: Admiralty Way | DATE: 5/28/2009 | LOCATION: City of Marina Del Rey

E-W STREET: Bali Way | DAY: THURSDAY | PROJECT□ 09-5215-010

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	.5	1	.5	1	.5	1.5	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	8	113	4	25	153	0	0	3	2	3	4	29	344
7:15 AM	2	179	9	31	159	1	4	5	0	2	3	41	436
7:30 AM	0	203	7	38	177	1	2	0	1	2	2	45	478
7:45 AM	6	226	7	34	203	1	1	2	2	3	2	31	518
8:00 AM	5	170	5	32	233	4	2	5	4	4	3	46	513
8:15 AM	2	224	9	39	263	1	2	5	0	2	8	68	623
8:30 AM	7	199	13	33	244	5	3	5	2	7	6	55	579
8:45 AM	8	204	12	48	234	5	2	8	6	6	5	62	600
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL VOLUMES □	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	38	1518	66	280	1666	18	16	33	17	29	33	377	4091

AM Peak Hr Begins at: 800 AM

PEAK VOLUMES □	22	797	39	152	974	15	9	23	12	19	22	231	2315
PEAK HR. FACTOR:		0.913			0.941			0.688			0.872		0.929

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data ☐Surveying Services

N-S STREET: Admiralty Way DATE: 5/28/2009 LOCATION: City of Marina Del Rey

E-W STREET: Bali Way DAY: THURSDAY PROJECT☐ 09-5215-010

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	.5	1	.5	1	.5	1.5	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	4	216	29	44	241	4	4	7	7	10	9	59	634
4:15 PM	2	223	28	53	261	5	6	9	5	8	4	70	674
4:30 PM	3	193	34	55	255	1	5	10	5	11	10	67	649
4:45 PM	6	224	25	56	290	5	5	1	7	10	3	86	718
5:00 PM	6	237	43	48	281	7	10	19	9	14	5	69	748
5:15 PM	4	263	30	28	295	1	0	11	3	6	1	96	738
5:30 PM	2	276	36	38	288	2	2	2	5	9	6	83	749
5:45 PM	1	247	28	54	257	5	6	4	4	7	6	92	711
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL VOLUMES ☐	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	28	1879	253	376	2168	30	38	63	45	75	44	622	5621

PM Peak Hr Begins at: 445 PM

PEAK VOLUMES ☐	18	1000	134	170	1154	15	17	33	24	39	15	334	2953
PEAK HR. FACTOR:		0.917			0.954			0.487			0.942		0.986

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Lincoln Blvd | DATE: 5/26/2009 | LOCATION: City of Marina Del Rey

E-W STREET: Bali Way | DAY: TUESDAY | PROJECT# 09-5215-011

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	1	2	0	1.5	.5	1	0	1	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	16	402	3	2	188	25	28	1	10	0		2	677
7:15 AM	20	453	5	4	214	30	31	2	9	1		1	770
7:30 AM	24	460	4	3	251	27	37	1	6	0		1	814
7:45 AM	15	434	4	3	241	27	34	1	8	0		1	768
8:00 AM	23	393	8	3	245	33	34	2	7	0		5	753
8:15 AM	33	400	7	8	280	40	39	0	12	1		2	822
8:30 AM	20	411	5	8	327	53	43	0	12	2		3	884
8:45 AM	35	429	11	8	311	43	57	0	9	0		3	906
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	186	3382	47	39	2057	278	303	7	73	4	0	18	6394

AM Peak Hr Begins at: 800 AM

PEAK VOLUMES =	111	1633	31	27	1163	169	173	2	40	3	0	13	3365
PEAK HR. FACTOR:		0.934			0.876			0.814			0.800		0.929

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data ☐ Surveying Services

N-S STREET: Lincoln Blvd   DATE: 5/26/2009   LOCATION: City of Marina Del Rey

E-W STREET: Bali Way   DAY: TUESDAY   PROJECT☐ 09-5215-011

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	1	2	0	1.5	.5	1	0	1	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	18	332	5	1	343	58	71	0	15	1	1	8	853
4:15 PM	20	317	4	1	370	66	67	1	12	1	0	6	865
4:30 PM	25	353	3	0	359	66	68	0	22	1	0	4	901
4:45 PM	20	344	2	3	360	69	74	0	14	3	0	11	900
5:00 PM	29	382	5	1	340	66	80	1	21	1	0	7	933
5:15 PM	30	405	5	2	406	77	51	2	11	0	0	7	996
5:30 PM	38	346	0	1	366	52	60	0	15	2	0	8	888
5:45 PM	34	357	3	0	341	69	53	1	17	0	0	6	881
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL VOLUMES ☐	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	214	2836	27	9	2885	523	524	5	127	9	1	57	7217

PM Peak Hr Begins at: 430 PM

PEAK VOLUMES ☐	104	1484	15	6	1465	278	273	3	68	5	0	29	3730
PEAK HR. FACTOR:		0.911			0.902			0.843			0.607		0.936

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data □Surveying Services

N-S STREET: Admiralty Way | DATE: 5/28/2009 | LOCATION: City of Marina Del Rey

E-W STREET: Mindanao Way | DAY: THURSDAY | PROJECT□ 09-5215-012

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	.5	.5	1.5	.5	1	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	4	94	7	52	104	1	2	6	1	21	10	46	348
7:15 AM	2	136	6	61	98	0	3	3	3	18	9	70	409
7:30 AM	7	128	2	67	93	3	4	4	3	17	8	87	423
7:45 AM	8	148	3	81	109	2	7	4	10	26	11	117	526
8:00 AM	7	103	7	77	140	2	10	5	8	29	11	96	495
8:15 AM	4	154	11	94	146	6	4	6	9	32	7	113	586
8:30 AM	5	159	14	88	141	6	3	2	4	33	6	98	559
8:45 AM	11	158	17	85	155	5	4	5	3	34	10	112	599
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL VOLUMES □	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	48	1080	67	605	986	25	37	35	41	210	72	739	3945

AM Peak Hr Begins at: 800 AM

PEAK VOLUMES □	27	574	49	344	582	19	21	18	24	128	34	419	2239
PEAK HR. FACTOR:		0.874			0.960			0.685			0.931		0.934

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data ☐Surveying Services

N-S STREET: Admiralty Way | DATE: 5/28/2009 | LOCATION: City of Marina Del Rey

E-W STREET: Mindanao Way | DAY: THURSDAY | PROJECT☐ 09-5215-012

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	.5	.5	1.5	.5	1	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	4	148	25	75	173	12	7	8	8	90	16	93	659
4:15 PM	3	176	28	61	219	3	7	11	2	70	9	92	681
4:30 PM	4	154	37	81	223	5	7	8	3	83	19	94	718
4:45 PM	16	215	32	85	274	6	3	11	9	74	10	124	859
5:00 PM	6	198	34	100	232	3	6	4	6	76	15	87	767
5:15 PM	5	198	40	63	268	4	8	7	9	72	3	123	800
5:30 PM	12	219	33	81	244	2	17	11	4	75	18	124	840
5:45 PM	9	209	34	102	214	4	3	7	5	79	4	135	805
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES ☐	59	1517	263	648	1847	39	58	67	46	619	94	872	6129

PM Peak Hr Begins at: 445 PM

PEAK VOLUMES ☐	39	830	139	329	1018	15	34	33	28	297	46	458	3266
PEAK HR. FACTOR:		0.955			0.933			0.742			0.923		0.951

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data ☐Surveying Services

N-S STREET: Lincoln Blvd | DATE: 5/26/2009 | LOCATION: City of Marina Del Rey

E-W STREET: Mindanao Way | DAY: TUESDAY | PROJECT☐ 09-5215-013

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U - Turns	
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NL	SL
LANES:	1	3	1	1	3	0	0	2	0	2	1.5	.5			
6:00 AM															
6:15 AM															
6:30 AM															
6:45 AM															
7:00 AM	9	342	39	9	161	10		65	7	23	60	15	740	2	0
7:15 AM	24	462	59	17	157	5		85	6	31	63	13	922	0	3
7:30 AM	27	471	70	9	241	6		85	5	48	80	10	1052	1	3
7:45 AM	33	419	64	16	216	11		97	9	49	116	13	1043	2	3
8:00 AM	35	406	72	18	211	8		107	6	43	90	24	1020	2	7
8:15 AM	21	398	76	22	238	15		132	14	50	120	26	1112	1	5
8:30 AM	31	406	77	28	258	15		131	17	45	102	21	1131	1	2
8:45 AM	30	429	70	19	251	16		120	13	60	104	24	1136	1	4
9:00 AM															
9:15 AM															
9:30 AM															
9:45 AM															
10:00 AM															
10:15 AM															
10:30 AM															
10:45 AM															
11:00 AM															
11:15 AM															
11:30 AM															
11:45 AM															

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL		
VOLUMES ☐	210	3333	527	138	1733	86	0	822	77	349	735	146	8156	10	27

AM Peak Hr Begins at: 800 AM

PEAK VOLUMES ☐	117	1639	295	87	958	54	0	490	50	198	416	95	4399
PEAK HR. FACTOR:		0.969			0.913			0.912			0.904		0.968

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data ☐Surveying Services

N-S STREET: Lincoln Blvd   DATE: 5/26/2009   LOCATION: City of Marina Del Rey

E-W STREET: Mindanao Way   DAY: TUESDAY   PROJECT☐ 09-5215-013

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U - Turns	
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NL	SL
LANES:	1	3	1	1	3	0	0	2	0	2	1.5	.5			
1:00 PM															
1:15 PM															
1:30 PM															
1:45 PM															
2:00 PM															
2:15 PM															
2:30 PM															
2:45 PM															
3:00 PM															
3:15 PM															
3:30 PM															
3:45 PM															
4:00 PM	20	319	68	33	300	29		120	30	82	131	19	1151	2	2
4:15 PM	23	306	60	34	352	22		126	36	77	94	19	1149	1	2
4:30 PM	21	341	75	41	348	25		112	24	84	127	18	1216	2	5
4:45 PM	19	333	51	25	328	28		114	34	73	138	17	1160	2	5
5:00 PM	20	365	71	54	341	21		134	28	103	122	27	1286	3	2
5:15 PM	19	386	66	50	384	17		106	36	89	144	26	1323	3	4
5:30 PM	18	347	57	45	354	22		107	32	92	134	20	1228	0	5
5:45 PM	27	348	75	43	326	20		134	34	88	153	16	1264	5	4
6:00 PM															
6:15 PM															
6:30 PM															
6:45 PM															
TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL		
VOLUMES ☐	167	2745	523	325	2733	184	0	953	254	688	1043	162	9777	18	29

PM Peak Hr Begins at: 500 PM

PEAK VOLUMES ☐	84	1446	269	192	1405	80	0	481	130	372	553	89	5101
PEAK HR. FACTOR:		0.955			0.930			0.909			0.979		0.964

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data ☐Surveying Services

N-S STREET: Admiralty Way | DATE: 5/28/2009 | LOCATION: City of Marina Del Rey

E-W STREET: Fiji Way | DAY: THURSDAY | PROJECT☐ 09-5215-014

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	2	0	1	1	2	0	0	1	1	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM				77		14	13	20			29	72	225
7:15 AM				83		10	16	21			28	87	245
7:30 AM				81		9	24	11			30	139	294
7:45 AM				118		14	9	32			22	133	328
8:00 AM				146		14	14	15			17	104	310
8:15 AM				152		18	18	19			17	151	375
8:30 AM				124		21	18	32			17	153	365
8:45 AM				127		32	17	23			25	133	357
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES ☐	0	0	0	908	0	132	129	173	0	0	185	972	2499

AM Peak Hr Begins at: 800 AM

PEAK VOLUMES ☐	0	0	0	549	0	85	67	89	0	0	76	541	1407
PEAK HR. FACTOR:		0.000			0.932			0.780			0.907		0.938

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data ☐Surveying Services

N-S STREET: Admiralty Way   DATE: 5/28/2009   LOCATION: City of Marina Del Rey

E-W STREET: Fiji Way   DAY: THURSDAY   PROJECT☐ 09-5215-014

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	2	0	1	1	2	0	0	1	1	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM				113		14	13	64			30	85	319
4:15 PM				149		23	10	33			35	88	338
4:30 PM				181		28	18	48			32	87	394
4:45 PM				162		31	19	41			28	109	390
5:00 PM				192		27	10	48			45	101	423
5:15 PM				233		39	13	37			39	115	476
5:30 PM				239		25	21	42			37	122	486
5:45 PM				173		30	17	33			41	110	404
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL VOLUMES ☐	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	0	0	1442	0	217	121	346	0	0	287	817	3230

PM Peak Hr Begins at: 500 PM

PEAK VOLUMES ☐	0	0	0	837	0	121	61	160	0	0	162	448	1789
PEAK HR. FACTOR:		0.000			0.881			0.877			0.959		0.920

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data ☐Surveying Services

N-S STREET: Lincoln Blvd | DATE: 5/26/2009 | LOCATION: City of Marina Del Rey

E-W STREET: Fiji Way | DAY: TUESDAY | PROJECT☐ 09-5215-015

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	3	0	1	3	0	1	1	1	0	1	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	109	390	9	2	168	10	16	2	84	3	2	3	798
7:15 AM	119	514	5	5	179	10	9	5	90	3	6	6	951
7:30 AM	152	549	6	4	265	12	7	0	94	2	2	10	1103
7:45 AM	140	444	11	14	256	10	23	7	121	7	6	5	1044
8:00 AM	134	424	6	8	236	11	22	3	134	2	2	14	996
8:15 AM	142	441	6	11	279	19	29	5	138	4	2	10	1086
8:30 AM	139	427	10	5	304	8	25	5	130	5	6	5	1069
8:45 AM	131	424	11	15	327	11	17	3	132	4	3	10	1088
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES ☐	1066	3613	64	64	2014	91	148	30	923	30	29	63	8135

AM Peak Hr Begins at: 800 AM

PEAK VOLUMES ☐	546	1716	33	39	1146	49	93	16	534	15	13	39	4239
PEAK HR. FACTOR:		0.974			0.874			0.935			0.931		0.974

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data ☐Surveying Services

N-S STREET: Lincoln Blvd DATE: 5/26/2009 LOCATION: City of Marina Del Rey

E-W STREET: Fiji Way DAY: TUESDAY PROJECT☐ 09-5215-015

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	3	0	1	3	0	1	1	1	0	1	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	99	293	13	16	358	13	34	5	128	7	5	7	978
4:15 PM	122	324	6	16	401	26	15	5	160	8	9	1	1093
4:30 PM	107	356	9	13	405	26	23	4	192	6	7	7	1155
4:45 PM	111	333	9	16	365	23	13	2	202	14	2	8	1098
5:00 PM	153	382	5	20	443	25	24	2	216	10	5	7	1292
5:15 PM	165	430	8	15	489	24	14	2	254	11	3	10	1425
5:30 PM	217	402	5	29	457	16	13	1	282	9	8	9	1448
5:45 PM	158	456	5	23	421	19	15	3	178	10	6	12	1306
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES ☐	1132	2976	60	148	3339	172	151	24	1612	75	45	61	9795

PM Peak Hr Begins at: 500 PM

PEAK VOLUMES ☐	693	1670	23	87	1810	84	66	8	930	40	22	38	5471
PEAK HR. FACTOR:		0.956			0.938			0.848			0.893		0.945

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data ☐Surveying Services

N-S STREET: Mindanao Way DATE: 5/26/2009 LOCATION: City of Marina Del Rey

E-W STREET: Marina Expressway EB DAY: TUESDAY PROJECT☐ 09-5215-016

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1.5	1.5	1	2	0	1	2	0	0	0	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM		47	124	57	129		3	165	0				525
7:15 AM		46	114	76	115		2	179	3				535
7:30 AM		79	151	56	159		0	215	2				662
7:45 AM		68	161	91	187		4	218	3				732
8:00 AM		70	146	99	178		1	224	1				719
8:15 AM		77	188	108	206		1	245	6				831
8:30 AM		100	144	89	196		2	218	1				750
8:45 AM		88	151	95	190		5	237	4				770
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL VOLUMES ☐	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	575	1179	671	1360	0	18	1701	20	0	0	0	5524

AM Peak Hr Begins at: 800 AM

PEAK VOLUMES ☐	0	335	629	391	770	0	9	924	12	0	0	0	3070
PEAK HR. FACTOR:		0.909			0.924			0.938			0.000		0.924

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data ☐ Surveying Services

N-S STREET: Mindanao Way DATE: 5/26/2009 LOCATION: City of Marina Del Rey

E-W STREET: Marina Expressway EB DAY: TUESDAY PROJECT☐ 09-5215-016

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1.5	1.5	1	2	0	1	2	0	0	0	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM		126	145	110	216		1	199	5				802
4:15 PM		107	113	118	229		4	226	3				800
4:30 PM		106	126	136	220		6	212	4				810
4:45 PM		97	107	124	248		5	233	8				822
5:00 PM		125	153	159	245		0	244	11				937
5:15 PM		109	151	176	231		1	246	7				921
5:30 PM		94	139	197	205		4	241	12				892
5:45 PM		131	129	210	206		2	200	9				887
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES ☐	0	895	1063	1230	1800	0	23	1801	59	0	0	0	6871

PM Peak Hr Begins at: 500 PM

PEAK VOLUMES ☐	0	459	572	742	887	0	7	931	39	0	0	0	3637
PEAK HR. FACTOR:		0.927			0.979			0.950			0.000		0.970

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data □Surveying Services

N-S STREET: Mindanao Way DATE: 5/26/2009 LOCATION: City of Marina Del Rey

E-W STREET: Marina Expressway WB DAY: TUESDAY PROJECT□ 09-5215-017

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	0	3	1	0	0	0	1.5	1.5	1	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	2	43			103	6				79	166	90	489
7:15 AM	1	51			105	2				92	190	110	551
7:30 AM	4	71			112	2				99	193	171	652
7:45 AM	3	72			153	1				129	207	142	707
8:00 AM	1	67			139	3				133	165	113	621
8:15 AM	1	80			176	8				143	207	83	698
8:30 AM	4	96			162	8				122	207	102	701
8:45 AM	5	90			152	1				134	280	127	789
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES □	21	570	0	0	1102	31	0	0	0	931	1615	938	5208

AM Peak Hr Begins at: 800 AM

PEAK VOLUMES □	11	333	0	0	629	20	0	0	0	532	859	425	2809
PEAK HR. FACTOR:		0.860			0.882			0.000			0.839		0.890

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data ☐Surveying Services

N-S STREET:	Mindanao Way	DATE:	5/26/2009	LOCATION:	City of Marina Del Rey
E-W STREET:	Marina Expressway WB	DAY:	TUESDAY	PROJECT☐	09-5215-017

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	0	3	1	0	0	0	1.5	1.5	1	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	7	115			232	16				106	216	70	762
4:15 PM	5	111			245	14				108	171	82	736
4:30 PM	5	104			239	13				113	218	75	767
4:45 PM	2	104			238	10				138	251	99	842
5:00 PM	4	117			284	11				123	226	96	861
5:15 PM	4	109			268	20				140	243	94	878
5:30 PM	3	93			247	9				156	259	123	890
5:45 PM	6	129			267	17				150	241	116	926
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES ☐	36	882	0	0	2020	110	0	0	0	1034	1825	755	6662

PM Peak Hr Begins at: 500 PM

PEAK VOLUMES ☐	17	448	0	0	1066	57	0	0	0	569	969	429	3555
PEAK HR. FACTOR:		0.861			0.952			0.000			0.914		0.960

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data ☐ Surveying Services

N-S STREET: Culver Blvd — DATE: 5/26/2009 — LOCATION: City of Marina Del Rey

E-W STREET: W Jefferson Blvd — DAY: TUESDAY — PROJECT☐ 09-5215-018

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	1	0	2	0	0	0	0	2	0	1	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM		490	60	0	70					45		0	665
7:15 AM		598	90	0	89					74		0	851
7:30 AM		608	100	1	95					85		0	889
7:45 AM		503	103	10	102					115		2	835
8:00 AM		557	133	12	94					86		0	882
8:15 AM		573	109	8	90					81		1	862
8:30 AM		644	145	5	80					120		2	996
8:45 AM		566	149	3	107					90		1	916
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL VOLUMES ☐	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	4539	889	39	727	0	0	0	0	696	0	6	6896

AM Peak Hr Begins at: 800 AM

PEAK VOLUMES ☐	0	2340	536	28	371	0	0	0	0	377	0	4	3656
PEAK HR. FACTOR:		0.911			0.907			0.000			0.781		0.918

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data ☐ Surveying Services

N-S STREET: Culver Blvd   DATE: 5/26/2009   LOCATION: City of Marina Del Rey

E-W STREET: W Jefferson Blvd   DAY: TUESDAY   PROJECT☐ 09-5215-018

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	1	0	2	0	0	0	0	2	0	1	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM		207	47	12	196					195		1	658
4:15 PM		221	62	5	236					225		0	749
4:30 PM		193	56	10	237					228		0	724
4:45 PM		199	54	17	251					214		2	737
5:00 PM		213	57	16	312					277		0	875
5:15 PM		207	49	10	342					278		1	887
5:30 PM		207	67	18	324					333		1	950
5:45 PM		243	41	18	323					303		1	929
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES ☐	0	1690	433	106	2221	0	0	0	0	2053	0	6	6509

PM Peak Hr Begins at: 500 PM

PEAK VOLUMES ☐	0	870	214	62	1301	0	0	0	0	1191	0	3	3641
PEAK HR. FACTOR:		0.954			0.968			0.000			0.894		0.958

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data ☐Surveying Services

N-S STREET: Lincoln Blvd DATE: 5/26/2009 LOCATION: City of Marina Del Rey

E-W STREET: W Jefferson Blvd DAY: TUESDAY PROJECT☐ 09-5215-019

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	1	2	2	1	1	2	0	2	2	2	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	1	393	46	53	168	37	26	36	1	33	11	53	858
7:15 AM	0	539	99	37	167	45	34	55	4	46	26	95	1147
7:30 AM	5	580	140	55	266	56	42	61	0	73	30	99	1407
7:45 AM	10	397	150	72	253	67	24	75	16	94	24	122	1304
8:00 AM	19	386	148	74	222	43	50	89	6	92	21	110	1260
8:15 AM	2	401	116	81	265	51	33	78	5	69	26	134	1261
8:30 AM	3	275	111	96	247	76	36	103	14	59	46	112	1178
8:45 AM	2	371	109	109	249	66	39	106	4	68	19	124	1266
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES ☐	42	3342	919	577	1837	441	284	603	50	534	203	849	9681

AM Peak Hr Begins at: 730 AM

PEAK VOLUMES ☐	36	1764	554	282	1006	217	149	303	27	328	101	465	5232
PEAK HR. FACTOR:		0.812			0.948			0.826			0.931		0.930

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data ☐Surveying Services

N-S STREET: Lincoln Blvd | DATE: 5/26/2009 | LOCATION: City of Marina Del Rey

E-W STREET: W Jefferson Blvd | DAY: TUESDAY | PROJECT☐ 09-5215-019

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	1	2	2	1	1	2	0	2	2	2	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	9	338	69	103	340	120	13	41	10	92	72	133	1340
4:15 PM	11	290	67	101	342	143	12	43	7	88	65	128	1297
4:30 PM	5	353	68	97	408	158	21	41	7	105	66	129	1458
4:45 PM	6	348	73	103	355	143	19	39	9	120	66	123	1404
5:00 PM	0	383	40	104	376	162	2	56	12	119	116	136	1506
5:15 PM	5	361	79	121	444	189	9	32	14	131	84	149	1618
5:30 PM	12	348	59	119	367	218	8	71	11	124	104	130	1571
5:45 PM	10	336	66	100	356	184	11	31	12	126	110	150	1492
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL VOLUMES ☐	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	58	2757	521	848	2988	1317	95	354	82	905	683	1078	11686

PM Peak Hr Begins at: 500 PM

PEAK VOLUMES ☐	27	1428	244	444	1543	753	30	190	49	500	414	565	6187
PEAK HR. FACTOR:		0.954			0.908			0.747			0.958		0.956

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data ☐Surveying Services

N-S STREET: Palawan Wy | DATE: 01/28/2010 | LOCATION: City of Marina Del Rey

E-W STREET: Washington Blvd | DAY: THURSDAY | PROJECT☐ 10-5040-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	1	0	0	0	0	3	0	1	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM			13					139	3	30	88		273
7:15 AM			39					148	9	14	80		290
7:30 AM			58					172	2	32	83		347
7:45 AM			42					215	13	23	115		408
8:00 AM			61					266	13	36	149		525
8:15 AM			52					227	19	68	146		512
8:30 AM			44					218	19	37	151		469
8:45 AM			44					187	15	27	138		411
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES ☐	0	0	353	0	0	0	0	1572	93	267	950	0	3235

AM Peak Hr Begins at: 800 AM

PEAK VOLUMES ☐	0	0	201	0	0	0	0	898	66	168	584	0	1917
PEAK HR. FACTOR:		0.824			0.000			0.864			0.879		0.913

CONTROL: 1-way stop (NB)

Intersection Turning Movement

Prepared by:

National Data ☐Surveying Services

N-S STREET: Palawan Wy   DATE: 01/28/2010   LOCATION: City of Marina Del Rey

E-W STREET: Washington Blvd   DAY: THURSDAY   PROJECT☐ 10-5040-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	1	0	0	0	0	3	0	1	2	0	
4:00 PM			32					156	34	68	169		459
4:15 PM			37					195	29	76	150		487
4:30 PM			36					182	30	89	171		508
4:45 PM			32					167	22	73	182		476
5:00 PM			37					162	32	95	176		502
5:15 PM			37					195	28	89	187		536
5:30 PM			27					188	25	85	174		499
5:45 PM			51					191	26	86	179		533

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES ☐	0	0	289	0	0	0	0	1436	226	661	1388	0	4000

PM Peak Hr Begins at: 500 PM

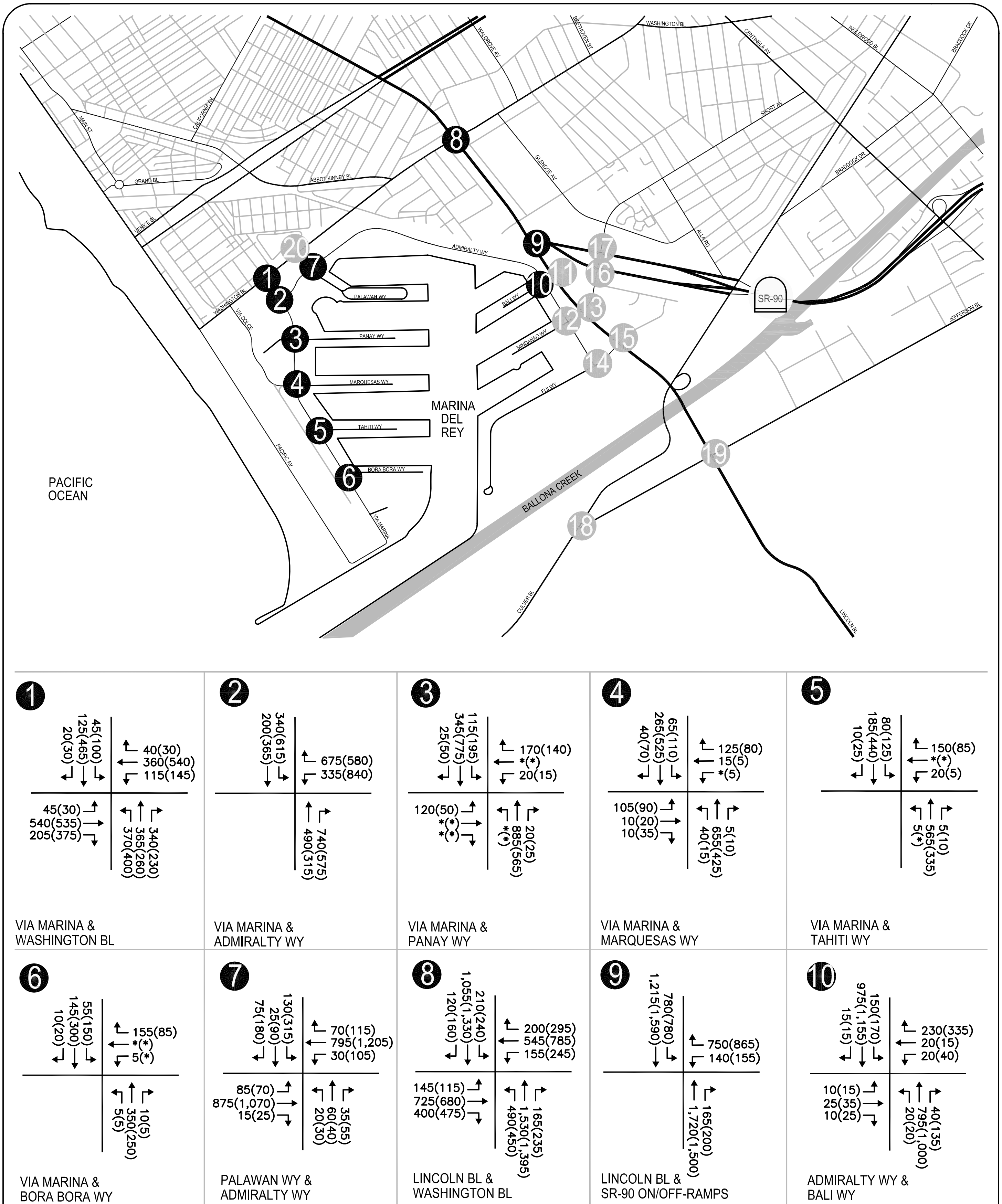
PEAK VOLUMES ☐	0	0	152	0	0	0	0	736	111	355	716	0	2070
PEAK HR. FACTOR:		0.745			0.000			0.950			0.970		0.965

CONTROL: 1-way stop (NB)

APPENDIX C

Existing (2009) Conditions Traffic Volumes and Level of Service Worksheets

• All signalized intersections include V/C credit of 0.10 to account from ATSAC and ATCS. ATCS credit of 0.03 is not automatically reflected on the capacity calculation worksheets.



LEGEND:

XXX(XXX) - AM(PM) PEAK HOUR TRAFFIC VOLUMES ROUNDED TO THE NEAREST 5 VEHICLES

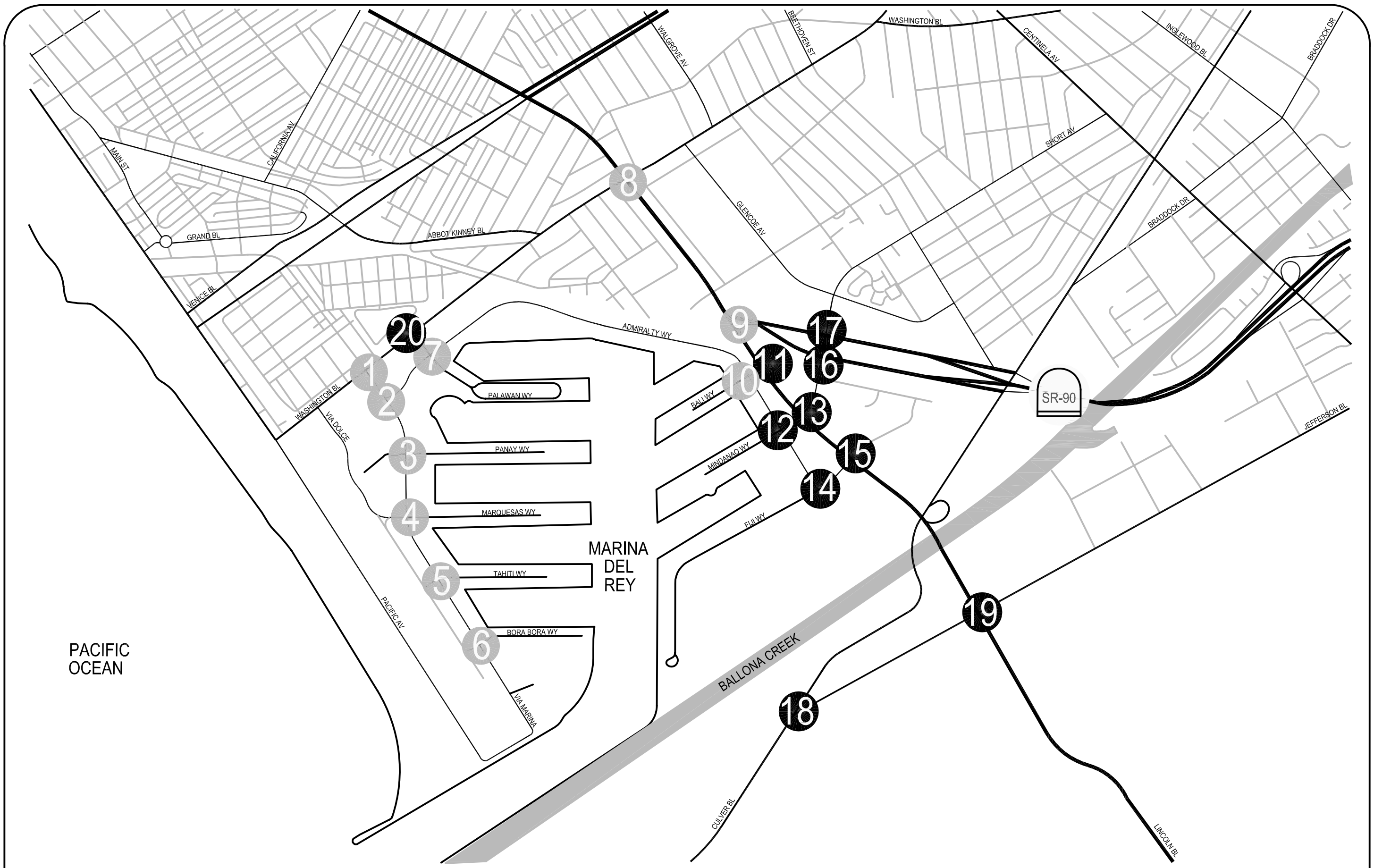
- STUDY INTERSECTION

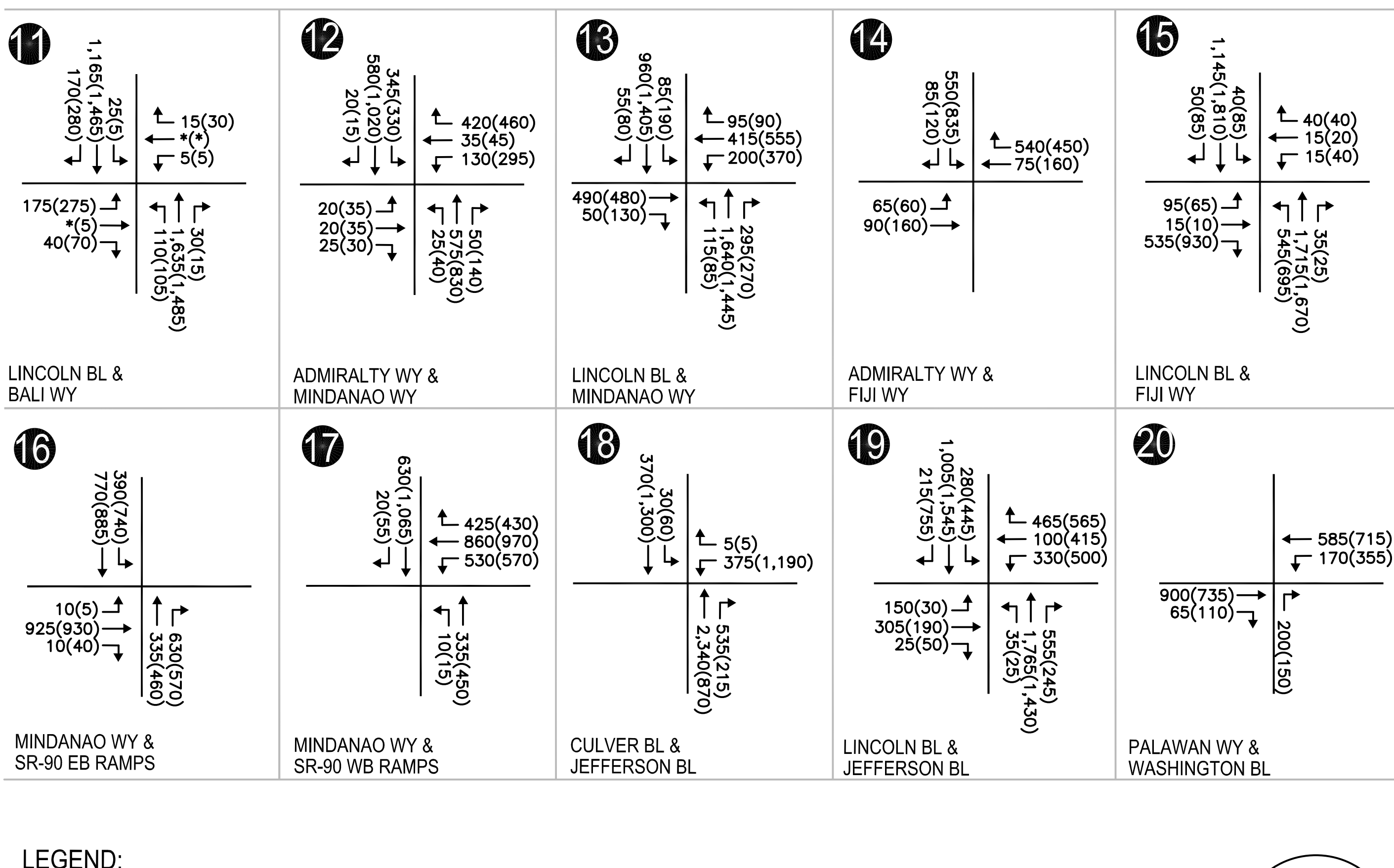
* - NEGLIGIBLE VOLUME

N
Not to scale

APPENDIX C-1
EXISTING (2009) CONDITIONS TRAFFIC VOLUMES

RAJU Associates, Inc.



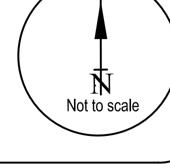


LEGEND:

XXX(XXX) - AM(PM) PEAK HOUR TRAFFIC VOLUMES ROUNDED TO THE NEAREST 5 VEHICLES

- STUDY INTERSECTION

* - NEGLIGIBLE VOLUME



APPENDIX C-2
EXISTING (2009) CONDITIONS TRAFFIC VOLUMES

RAJU Associates, Inc.

AM PEAK HOUR
LEVEL OF SERVICE WORKSHEETS

EXISTAM

CalcaDB

March 10, 2010 ,Wednesday 11:41:29 AM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA / OCEAN AVE W/E: WASHINGTON BLVD I/S No: 1

AM/PM: AM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	368	366	342	45	123	20	115	358	41	46	542	204
AMBIENT												
RELATED												
PROJECT												
TOTAL	368	366	342	45	123	20	115	358	41	46	542	204

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 1 0 0 1 0	1 0 0 0 1 0 0	1 0 1 0 1 0 0	1 0 2 0 0 1 0
SIGNAL Phasing	Split	Split	Perm	Perm
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	143	45
EastBound	271	46
WestBound	200	115
NorthBound	366	202

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (366 + 143 + 115 + 271) / 1425 = 0.558 LOS A

Developed by Chun Wong, 12/94

EXISTAM

CalcaDB

March 10, 2010 ,Wednesday 11:41:29 AM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: ADMIRALTY WY I/S No: 2

AM/PM: AM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	491	741	339	199	0	336	0	675	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	491	741	339	199	0	336	0	675	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 2 0 0 1 0	1 0 3 0 0 0 0	2 0 0 0 0 2 0	0 0 0 0 0 0 0
SIGNAL Phasing	Perm	Prot-Fix	Split	none
SIGNAL RTOR	Free	none	OLA	none

Critical Movements Diagram

	A	B
SouthBound	66	339
EastBound	0	0
WestBound	32	185
NorthBound	246	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (246 + 339 + 185 + 0) / 1425 = 0.470 LOS A

Developed by Chun Wong, 12/94

EXISTAM

CalcaDB

March 10, 2010 ,Wednesday 11:41:29 AM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: PANAY WY I/S No: 3

AM/PM: AM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	884	22	116	346	23	19	0	170	119	1	2
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	884	22	116	346	23	19	0	170	119	1	2

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	0 1 0 0 0 1 0	0 0 0 1 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 123 B: 116

EastBound A: 122 B: 119

WestBound A: 170 B: 19

NorthBound A: 302 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C 302 116 170 119 / 1500 0.401 LOS A

Developed by Chun Wong, 12 94

EXISTAM

CalcaDB

March 10, 2010 ,Wednesday 11:41:29 AM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: MARQUESAS WY I/S No: 4

AM/PM: AM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	40	654	7	65	264	42	2	15	126	106	9	12
AMBIENT												
RELATED												
PROJECT												
TOTAL	40	654	7	65	264	42	2	15	126	106	9	12

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 0 1 0	0 1 0 0 1 0 0	1 0 1 0 0 1 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 132 B: 65

EastBound A: 12 B: 106

WestBound A: 126 B: 2

NorthBound A: 220 B: 40

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C 220 65 126 106 / 1500 0.275 LOS A

Developed by Chun Wong, 12 94

EXISTAM

CalcaDB

March 10, 2010 ,Wednesday 11:41:29 AM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: TAHITI WY I/S No: 5

AM/PM: AM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	6	564	5	82	185	11	19	2	152	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	6	564	5	82	185	11	19	2	152	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 1 0 0	1 0 1 0 1 0 0	0 1 0 0 1 0 0	0 0 0 0 0 0 0
SIGNAL Phasing	Perm	Perm	Split	none
SIGNAL RTOR	Auto	Auto	Auto	none

Critical Movements Diagram

	A	B
SouthBound	98	82
EastBound	0	0
WestBound	152	19
NorthBound	288	6

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

$$V/C = \frac{288 + 82 + 152 + 0}{1500} = 0.278 \quad LOS\ A$$

Developed by Chun Wong, 12/94

EXISTAM

CalcaDB

March 10, 2010 ,Wednesday 11:41:29 AM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: BORA BORA WY I/S No: 6

AM/PM: AM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	5	348	9	57	147	9	6	1	155	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	5	348	9	57	147	9	6	1	155	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 1 0 0	1 0 1 0 1 0 0	0 0 0 1 0 0 0	0 0 0 0 0 0 0
SIGNAL Phasing	Perm	Perm	Perm	
SIGNAL RTOR	Auto	Auto	Auto	

Critical Movements Diagram

	A	B
SouthBound	78	57
EastBound	0	0
WestBound	162	6
NorthBound	181	5

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

$$V/C = \frac{181 + 57 + 162 + 0}{1200} = 0.333 \quad LOS\ A$$

Developed by Chun Wong, 12/94

EXISTAM

CalcaDB

March 10, 2010 ,Wednesday 11:41:29 AM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: ADMIRALTY WY I/S No: 7

AM/PM: AM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	19	62	36	129	27	75	28	796	70	83	874	16
AMBIENT												
RELATED												
PROJECT												
TOTAL	19	62	36	129	27	75	28	796	70	83	874	16

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 0 0 1 0 0	1 0 1 0 0 1 0	1 0 1 0 1 0 0	1 0 1 0 1 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 75 B: 129

EastBound A: 445 B: 83

WestBound A: 433 B: 28

NorthBound A: 98 B: 19

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C 98 129 433 83 / 1500 0.425 LOS A

Developed by Chun Wong, 12 94

EXISTAM

CalcaDB

March 10, 2010 ,Wednesday 11:41:29 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: WASHINGTON BLVD I/S No: 8

AM/PM: AM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	491	1530	163	212	1053	120	153	546	199	145	726	402
AMBIENT												
RELATED												
PROJECT												
TOTAL	491	1530	163	212	1053	120	153	546	199	145	726	402

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 2 0 1 0 0	2 0 2 0 1 0 0	2 0 2 0 0 1 0	2 0 2 0 0 1 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	OLA

Critical Movements Diagram

SouthBound A: 391 B: 117

EastBound A: 363 B: 80

WestBound A: 273 B: 84

NorthBound A: 564 B: 270

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C 564 117 84 363 / 1375 0.750 LOS C

Developed by Chun Wong, 12 94

EXISTAM

CalcaDB

April 21, 2010 ,Wednesday 12:58:46 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: SR-90 ON/OFF RAMPS I/S No: 9

AM/PM: AM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	1721	166	779	1214	0	139	0	752	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	1721	166	779	1214	0	139	0	752	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 2 0 1 0 0	2 0 3 0 0 0 0	2 0 0 0 0 2 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Prot-Fix	none	Split	OLA	none	none

Critical Movements Diagram

	A	B
SouthBound	405	428
EastBound	0	0
WestBound	0	76
NorthBound	629	0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (629 + 428 + 76 + 0) / 1425 = 0.725 LOS C

Developed by Chun Wong, 12/94

EXISTAM

CalcaDB

April 21, 2010 ,Wednesday 12:58:46 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: BALI WY I/S No: 10

AM/PM: AM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	22	797	39	152	974	15	19	22	231	9	23	12
AMBIENT									-152			
RELATED												
PROJECT												
TOTAL	22	797	39	152	974	15	19	22	79	9	23	12

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	1 0 1 0 1 0 0	1 0 0 0 1 1 0	0 1 0 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	OLA	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	495	152
EastBound	22	9
WestBound	51	19
NorthBound	418	22

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (418 + 152 + 51 + 9) / 1425 = 0.372 LOS A

Developed by Chun Wong, 12/94

EXISTAM

CalcaDB

March 10, 2010 ,Wednesday 11:41:29 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: BALI WY I/S No: 11

AM/PM: AM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	111	1633	31	27	1163	169	3	0	13	173	2	40
AMBIENT												
RELATED												
PROJECT												
TOTAL	111	1633	31	27	1163	169	3	0	13	173	2	40

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	0 0 0 1 0 0 0	1 1 0 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	Auto	Split	Auto

Critical Movements Diagram

	A:	B:
SouthBound	444	27
EastBound	88	88
WestBound	16	3
NorthBound	555	111

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (555 □ 27 □ 16 □ 88) / □1375 □ 0.429 LOS □ A

Developed by Chun Wong, 12/94

EXISTAM

CalcaDB

March 10, 2010 ,Wednesday 11:41:29 AM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: MINDANAO WY I/S No: 12

AM/PM: AM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	27	574	49	344	582	19	128	34	419	21	18	24
AMBIENT												
RELATED												
PROJECT												
TOTAL	27	574	49	344	582	19	128	34	419	21	18	24

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	1 0 1 0 1 0 0	1 1 0 0 0 1 0	1 0 0 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	OLA	Split	Auto

Critical Movements Diagram

	A:	B:
SouthBound	301	344
EastBound	42	21
WestBound	81	81
NorthBound	312	27

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (312 □ 344 □ 81 □ 42) / □1375 □ 0.497 LOS □ A

Developed by Chun Wong, 12/94

EXISTAM

CalcaDB

March 10, 2010 ,Wednesday 11:41:29 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: MINDANAO WY I/S No: 13

AM/PM: AM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	117	1639	295	87	958	54	198	416	95	0	490	50
AMBIENT												
RELATED												
PROJECT												
TOTAL	117	1639	295	87	958	54	198	416	95	0	490	50

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 3 0 0 1 0	1 0 2 0 1 0 0	2 0 1 0 1 0 0	0 0 1 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 337 B: 87

EastBound A: 270 B: 0

WestBound A: 256 B: 109

NorthBound A: 546 B: 117

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C 546 87 109 270 / 1375 0.666 LOS B

Developed by Chun Wong, 12.94

EXISTAM

CalcaDB

March 10, 2010 ,Wednesday 11:41:29 AM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: FIJI WY I/S No: 14

AM/PM: AM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	0	549	0	85	0	76	541	67	89	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	549	0	85	0	76	541	67	89	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 0 0 0 0	2 0 0 0 0 1 0	0 0 1 0 0 1 0	1 0 2 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	none	none	Split	Free	Perm	Free	Perm	none

Critical Movements Diagram

SouthBound A: 0 B: 302

EastBound A: 45 B: 67

WestBound A: 76 B: 0

NorthBound A: 0 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C 0 302 76 67 / 1500 0.227 LOS A

Developed by Chun Wong, 12.94

EXISTAM

CalcaDB

March 10, 2010 ,Wednesday 11:41:29 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD | W/E: FIJI WY | I/S No: 15

AM/PM: AM | Comments: EXISTING (2009)

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	546	1716	33	39	1146	49	15	13	39	93	16	534
AMBIENT												
RELATED												
PROJECT												
TOTAL	546	1716	33	39	1146	49	15	13	39	93	16	534

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	2	0	2	0	1	0	0	1	0	2	0	1	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Free

Critical Movements Diagram

Approach	A	B
SouthBound	398	39
EastBound	16	93
WestBound	67	15
NorthBound	583	300

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (300 □ 398 □ 67 □ 93) / □1425 □ 0.532 LOS □ A

Developed by Chun Wong, 12/94

EXISTAM

CalcaDB

March 10, 2010 ,Wednesday 11:41:29 AM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY | W/E: SR-90 EB ON/OFF RAMPS | I/S No: 16

AM/PM: AM | Comments: EXISTING (2009)

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	335	629	391	770	0	0	0	0	9	924	12
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	335	629	391	770	0	0	0	0	9	924	12

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	0	1	0	1	1	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Prot-Fix	□none□	□none□	□none□	Split	Auto

Critical Movements Diagram

Approach	A	B
SouthBound	385	215
EastBound	468	9
WestBound	0	0
NorthBound	321	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (321 □ 215 □ 0 □ 468) / □1425 □ 0.635 LOS □ B

Developed by Chun Wong, 12/94

EXISTAM

CalcaDB

March 10, 2010 ,Wednesday 11:41:29 AM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 WB ON/OFF RAMPS I/S No: 17

AM/PM: AM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	11	333	0	0	629	20	532	859	425	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	11	333	0	0	629	20	532	859	425	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 0 0 0	0 0 2 0 1 0 0	1 1 1 0 0 1 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	none	Perm	Auto	Split	Auto	none	none

Critical Movements Diagram

SouthBound A: 216 B: 0

EastBound A: 0 B: 0

WestBound A: 464 B: 464

NorthBound A: 167 B: 11

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (11 + 216 + 464 - 0) / 1425 = 0.415 LOS A

Developed by Chun Wong, 12/94

EXISTAM

CalcaDB

March 10, 2010 ,Wednesday 11:41:29 AM

INTERSECTION DATA SUMMARY SHEET

N/S: CULVER BLVD W/E: JEFFERSON BLVD I/S No: 18

AM/PM: AM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	2340	536	28	371	0	377	0	4	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	2340	536	28	371	0	377	0	4	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 2 0 0 1 0	0 1 1 0 0 0 0	2 0 0 0 0 1 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Free	Perm	none	Split	Auto	none	none

Critical Movements Diagram

SouthBound A: 270 B: 28

EastBound A: 0 B: 0

WestBound A: 4 B: 207

NorthBound A: 1170 B: 0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (1170 + 28 + 207 - 0) / 1500 = 0.867 LOS D

Developed by Chun Wong, 12/94

EXISTAM

CalcaDB

March 10, 2010 ,Wednesday 11:41:29 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD   W/E: JEFFERSON BLVD   I/S No: 19

AM/PM: AM   Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	36	1764	554	282	1006	217	328	101	465	149	303	27
AMBIENT												
RELATED												
PROJECT												
TOTAL	36	1764	554	282	1006	217	328	101	465	149	303	27

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 4 0 0 1 0	2 0 3 0 1 0 0	2 0 2 0 0 2 0	1 0 2 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	Auto

Critical Movements Diagram

SouthBound A: 306 B: 155

EastBound A: 110 B: 149

WestBound A: 101 B: 180

NorthBound A: 441 B: 36

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (441 + 155 + 180 + 110) / 1375 = 0.574   LOS A

Developed by Chun Wong, 12/94

EXISTAM

CalcaDB

March 10, 2010 ,Wednesday 11:41:29 AM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY   W/E: WASHINGTON BLVD   I/S No: 20

AM/PM: AM   Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	201	0	0	0	168	584	0	0	898	66
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	201	0	0	0	168	584	0	0	898	66

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 0 0 1 0	0 0 0 0 0 0 0	1 0 2 0 0 0 0	0 0 2 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	Auto	none	none	Perm	none	Perm	Auto

Critical Movements Diagram

SouthBound A: 0 B: 0

EastBound A: 449 B: 0

WestBound A: 292 B: 168

NorthBound A: 201 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (201 + 0 + 168 + 449) / 1200 = 0.682   LOS B

Developed by Chun Wong, 12/94

PM PEAK HOUR
LEVEL OF SERVICE WORKSHEETS

EXISTPM

CalcaDB

March 10, 2010 ,Wednesday 11:50:00 AM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA / OCEAN AVE W/E: WASHINGTON BLVD I/S No: 1

AM/PM: PM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	402	258	231	100	467	29	146	542	31	29	537	376
AMBIENT												
RELATED												
PROJECT												
TOTAL	402	258	231	100	467	29	146	542	31	29	537	376

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 1 0 0 1 0	1 0 0 0 1 0 0	1 0 1 0 1 0 0	1 0 2 0 0 1 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Split	Auto	Split	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 496 B: 100

EastBound A: 269 B: 29

WestBound A: 287 B: 146

NorthBound A: 258 B: 221

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (258 + 496 + 146 + 269) / 1425 = 0.750 LOS = C

Developed by Chun Wong, 12/94

EXISTPM

CalcaDB

March 10, 2010 ,Wednesday 11:50:00 AM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: ADMIRALTY WY I/S No: 2

AM/PM: PM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	316	577	616	364	0	841	0	579	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	316	577	616	364	0	841	0	579	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 2 0 0 1 0	1 0 3 0 0 0 0	2 0 0 0 0 2 0	0 0 0 0 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Free	Prot-Fix	none	Split	OLA	none	none

Critical Movements Diagram

SouthBound A: 121 B: 616

EastBound A: 0 B: 0

WestBound A: 0 B: 463

NorthBound A: 158 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (158 + 616 + 463 + 0) / 1425 = 0.798 LOS = C

Developed by Chun Wong, 12/94

EXISTPM

CalcaDB

March 10, 2010 ,Wednesday 11:50:00 AM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA | W/E: PANAY WY | I/S No: 3

AM/PM: PM | Comments: EXISTING (2009)

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	1	567	25	197	776	50	14	2	142	50	1	1
AMBIENT												
RELATED												
PROJECT												
TOTAL	1	567	25	197	776	50	14	2	142	50	1	1

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	0 1 0 0 0 1 0	0 0 0 1 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	275	197
EastBound	52	50
WestBound	142	14
NorthBound	197	1

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (197 + 197 + 142 + 50) / 1500 = 0.321 LOS A

Developed by Chun Wong, 12/94

EXISTPM

CalcaDB

March 10, 2010 ,Wednesday 11:50:00 AM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA | W/E: MARQUESAS WY | I/S No: 4

AM/PM: PM | Comments: EXISTING (2009)

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	15	426	10	110	525	70	5	5	81	92	18	36
AMBIENT												
RELATED												
PROJECT												
TOTAL	15	426	10	110	525	70	5	5	81	92	18	36

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 0 1 0	0 1 0 0 1 0 0	1 0 1 0 0 1 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	263	110
EastBound	36	92
WestBound	81	5
NorthBound	145	15

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (15 + 263 + 81 + 92) / 1500 = 0.231 LOS A

Developed by Chun Wong, 12/94

EXISTPM

CalcaDB

March 10, 2010 ,Wednesday 11:50:00 AM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: TAHITI WY I/S No: 5

AM/PM: PM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	2	335	11	123	438	23	6	0	84	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	2	335	11	123	438	23	6	0	84	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 1 0 0	1 0 1 0 1 0 0	0 1 0 0 1 0 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Split	Auto	none	none

Critical Movements Diagram

SouthBound A: 231 B: 123

EastBound A: 0 B: 0

WestBound A: 84 B: 6

NorthBound A: 175 B: 2

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (175 + 123 + 84 + 0) / 1500 = 0.185 LOS A

Developed by Chun Wong, 12.94

EXISTPM

CalcaDB

March 10, 2010 ,Wednesday 11:50:00 AM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: BORA BORA WY I/S No: 6

AM/PM: PM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	3	250	5	150	299	19	1	0	86	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	3	250	5	150	299	19	1	0	86	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 1 0 0	1 0 1 0 1 0 0	0 0 0 1 0 0 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	none	none

Critical Movements Diagram

SouthBound A: 159 B: 150

EastBound A: 0 B: 0

WestBound A: 87 B: 1

NorthBound A: 131 B: 3

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (131 + 150 + 87 + 0) / 1200 = 0.307 LOS A

Developed by Chun Wong, 12.94

EXISTPM

CalcaDB

March 10, 2010 ,Wednesday 11:50:00 AM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: ADMIRALTY WY I/S No: 7

AM/PM: PM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	29	42	57	316	88	180	103	1206	117	70	1072	27
AMBIENT												
RELATED												
PROJECT												
TOTAL	29	42	57	316	88	180	103	1206	117	70	1072	27

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 0 0 1 0 0	1 0 1 0 0 1 0	1 0 1 0 1 0 0	1 0 1 0 1 0 0
SIGNAL Phasing	Perm	Perm	Perm	Perm
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	180	316
EastBound	550	70
WestBound	662	103
NorthBound	99	29

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (99 □ 316 □ 662 □ 70) / □1500 □ 0.695 LOS □ B

Developed by Chun Wong, 12/94

EXISTPM

CalcaDB

March 10, 2010 ,Wednesday 11:50:00 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: WASHINGTON BLVD I/S No: 8

AM/PM: PM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	450	1395	237	240	1331	160	243	783	296	116	679	477
AMBIENT												
RELATED												
PROJECT												
TOTAL	450	1395	237	240	1331	160	243	783	296	116	679	477

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 2 0 1 0 0	2 0 2 0 1 0 0	2 0 2 0 0 1 0	2 0 2 0 0 1 0
SIGNAL Phasing	Prot-Fix	Prot-Fix	Prot-Fix	Prot-Fix
SIGNAL RTOR	Auto	Auto	OLA	OLA

Critical Movements Diagram

	A	B
SouthBound	497	132
EastBound	340	64
WestBound	392	134
NorthBound	544	248

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (248 □ 497 □ 134 □ 340) / □1375 □ 0.817 LOS □ D

Developed by Chun Wong, 12/94

EXISTPM

CalcaDB

April 21, 2010 ,Wednesday 12:59:49 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: SR-90 ON/OFF RAMPS I/S No: 9

AM/PM: PM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	1502	200	779	1588	0	155	0	865	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	1502	200	779	1588	0	155	0	865	0	0	0

LANE							
NORTHBOUND	0	0	2	0	1	0	0
SOUTHBOUND	2	0	3	0	0	0	0
WESTBOUND	2	0	0	0	0	2	0
EASTBOUND	0	0	0	0	0	0	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Perm	Auto
SOUTHBOUND	Prot-Fix	none
WESTBOUND	Split	OLA
EASTBOUND	none	none

Critical Movements Diagram

	A	B
SouthBound	529	428
EastBound	0	0
WestBound	47	85
NorthBound	567	0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (567 + 428 + 85 + 0) / 1425 = 0.688 LOS B

Developed by Chun Wong, 12/94

EXISTPM

CalcaDB

April 21, 2010 ,Wednesday 12:59:49 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: BALI WY I/S No: 10

AM/PM: PM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	18	1000	134	170	1154	15	39	15	334	17	33	24
AMBIENT									-170			
RELATED												
PROJECT												
TOTAL	18	1000	134	170	1154	15	39	15	164	17	33	24

LANE							
NORTHBOUND	1	0	1	0	1	0	0
SOUTHBOUND	1	0	1	0	1	0	0
WESTBOUND	1	0	0	0	1	1	0
EASTBOUND	0	1	0	0	1	0	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Prot-Fix	Auto
SOUTHBOUND	Prot-Fix	Auto
WESTBOUND	Perm	OLA
EASTBOUND	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	585	170
EastBound	37	17
WestBound	90	39
NorthBound	567	18

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (567 + 170 + 90 + 17) / 1425 = 0.522 LOS A

Developed by Chun Wong, 12/94

EXISTPM

CalcaDB

March 10, 2010 ,Wednesday 11:50:00 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: BALI WY I/S No: 11

AM/PM: PM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	104	1484	15	6	1465	278	5	0	29	273	3	68
AMBIENT												
RELATED												
PROJECT												
TOTAL	104	1484	15	6	1465	278	5	0	29	273	3	68

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	2	0	1	0	0	1	0	2	0	1	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	Auto	Split	Auto

Critical Movements Diagram

	A:	B:
SouthBound	581	6
EastBound	138	138
WestBound	34	5
NorthBound	500	104

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (104 + 581 + 34 + 138) / 1375 = 0.553 LOS A

Developed by Chun Wong, 12/94

EXISTPM

CalcaDB

March 10, 2010 ,Wednesday 11:50:00 AM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: MINDANAO WY I/S No: 12

AM/PM: PM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	39	830	139	329	1018	15	297	46	458	34	33	28
AMBIENT												
RELATED												
PROJECT												
TOTAL	39	830	139	329	1018	15	297	46	458	34	33	28

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	1	0	1	0	0	1	0	1	0	1	0	0	1	1	0	0	0	1	0	1	0	0	0	1	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	OLA	Split	Auto

Critical Movements Diagram

	A:	B:
SouthBound	517	329
EastBound	61	34
WestBound	172	172
NorthBound	485	39

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (485 + 329 + 172 + 61) / 1375 = 0.691 LOS B

Developed by Chun Wong, 12/94

EXISTPM

CalcaDB

March 10, 2010 ,Wednesday 11:50:00 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: MINDANAO WY I/S No: 13

AM/PM: PM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	TH	RT	SOUTHBOUND LT	TH	RT	WESTBOUND LT	TH	RT	EASTBOUND LT	TH	RT
EXISTING	84	1446	269	192	1405	80	372	553	89	0	481	130
AMBIENT												
RELATED												
PROJECT												
TOTAL	84	1446	269	192	1405	80	372	553	89	0	481	130

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 3 0 0 1	1 0 2 0 1 0 0	2 0 1 0 1 0 0	0 0 1 0 1 0 0
SIGNAL Phasing	Prot-Fix	Prot-Fix	Prot-Fix	Perm
SIGNAL RTOR	OLA	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	495	192
EastBound	306	0
WestBound	321	205
NorthBound	482	84

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (482 + 192 + 205 + 306) / 1375 = 0.792 LOS C

Developed by Chun Wong, 12/94

EXISTPM

CalcaDB

March 10, 2010 ,Wednesday 11:50:00 AM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: FIJI WY I/S No: 14

AM/PM: PM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	TH	RT	SOUTHBOUND LT	TH	RT	WESTBOUND LT	TH	RT	EASTBOUND LT	TH	RT
EXISTING	0	0	0	837	0	121	0	162	448	61	160	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	837	0	121	0	162	448	61	160	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 0 0 0 0	2 0 0 0 0 1 0	0 0 1 0 0 1 0	1 0 2 0 0 0 0
SIGNAL Phasing	none	Split	Perm	Perm
SIGNAL RTOR	none	Free	Free	none

Critical Movements Diagram

	A	B
SouthBound	0	460
EastBound	80	61
WestBound	162	0
NorthBound	0	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (0 + 460 + 162 + 61) / 1500 = 0.385 LOS A

Developed by Chun Wong, 12/94

EXISTPM

CalcaDB

March 10, 2010 ,Wednesday 11:50:00 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: FIJI WY I/S No: 15

AM/PM: PM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	693	1670	23	87	1810	84	40	22	38	66	8	930
AMBIENT												
RELATED												
PROJECT												
TOTAL	693	1670	23	87	1810	84	40	22	38	66	8	930

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 2 0 1 0 0	1 0 2 0 1 0 0	0 0 0 1 0 0 0	1 0 1 0 0 1 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Free

Critical Movements Diagram

SouthBound A: 631 B: 87

EastBound A: 8 B: 66

WestBound A: 100 B: 40

NorthBound A: 564 B: 381

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C 381 631 100 66 / 1425 0.757 LOS C

Developed by Chun Wong, 12/94

EXISTPM

CalcaDB

March 10, 2010 ,Wednesday 11:50:00 AM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 EB ON/OFF RAMPS I/S No: 16

AM/PM: PM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	459	572	742	887	0	0	0	0	7	931	39
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	459	572	742	887	0	0	0	0	7	931	39

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 1 0 1 1 0	2 0 2 0 0 0 0	0 0 0 0 0 0 0	1 0 1 0 1 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Prot-Fix	none	none	none	Split	Auto

Critical Movements Diagram

SouthBound A: 444 B: 408

EastBound A: 485 B: 7

WestBound A: 0 B: 0

NorthBound A: 344 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C 344 408 0 485 / 1425 0.798 LOS C

Developed by Chun Wong, 12/94

EXISTPM

CalcaDB

March 10, 2010 ,Wednesday 11:50:00 AM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 WB ON/OFF RAMPS I/S No: 17

AM/PM: PM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	17	448	0	0	1066	57	569	969	429	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	17	448	0	0	1066	57	569	969	429	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 0 0 0	0 0 2 0 1 0 0	1 1 1 0 0 1 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	none	Perm	Auto	Split	Auto	none	none

Critical Movements Diagram

	A:	B:
SouthBound	374	0
EastBound	0	0
WestBound	513	513
NorthBound	224	17

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (17 + 374 + 513 + 0) / 1425 = 0.564 LOS A

Developed by Chun Wong, 12/94

EXISTPM

CalcaDB

March 10, 2010 ,Wednesday 11:50:00 AM

INTERSECTION DATA SUMMARY SHEET

N/S: CULVER BLVD W/E: JEFFERSON BLVD I/S No: 18

AM/PM: PM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	870	214	62	1301	0	1191	0	3	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	870	214	62	1301	0	1191	0	3	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 2 0 0 1 0	0 1 1 0 0 0 0	2 0 0 0 0 1 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Free	Perm	none	Split	Auto	none	none

Critical Movements Diagram

	A:	B:
SouthBound	837	62
EastBound	0	0
WestBound	3	655
NorthBound	435	0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (0 + 837 + 655 + 0) / 1500 = 0.925 LOS E

Developed by Chun Wong, 12/94

EXISTPM

CalcaDB

March 10, 2010 ,Wednesday 11:50:00 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: JEFFERSON BLVD I/S No: 19

AM/PM: PM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	27	1428	244	444	1543	753	500	414	565	30	190	49
AMBIENT												
RELATED												
PROJECT												
TOTAL	27	1428	244	444	1543	753	500	414	565	30	190	49

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 4 0 0 1 0	2 0 3 0 1 0 0	2 0 2 0 0 2 0	1 0 2 0 1 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	Auto

Critical Movements Diagram

	A:	B:
SouthBound	753	244
EastBound	80	30
WestBound	207	275
NorthBound	357	27

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (27 + 753 + 275 + 80) / 1375 = 0.755 LOS C

Developed by Chun Wong, 12:94

EXISTPM

CalcaDB

March 10, 2010 ,Wednesday 11:50:00 AM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: WASHINGTON BLVD I/S No: 20

AM/PM: PM Comments: EXISTING (2009)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	152	0	0	0	355	716	0	0	736	111
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	152	0	0	0	355	716	0	0	736	111

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 0 0 1 0	0 0 0 0 0 0 0	1 0 2 0 0 0 0	0 0 2 0 0 1 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Split	Auto	none	none	Perm	none	Perm	Auto

Critical Movements Diagram

	A:	B:
SouthBound	0	0
EastBound	368	0
WestBound	358	355
NorthBound	152	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

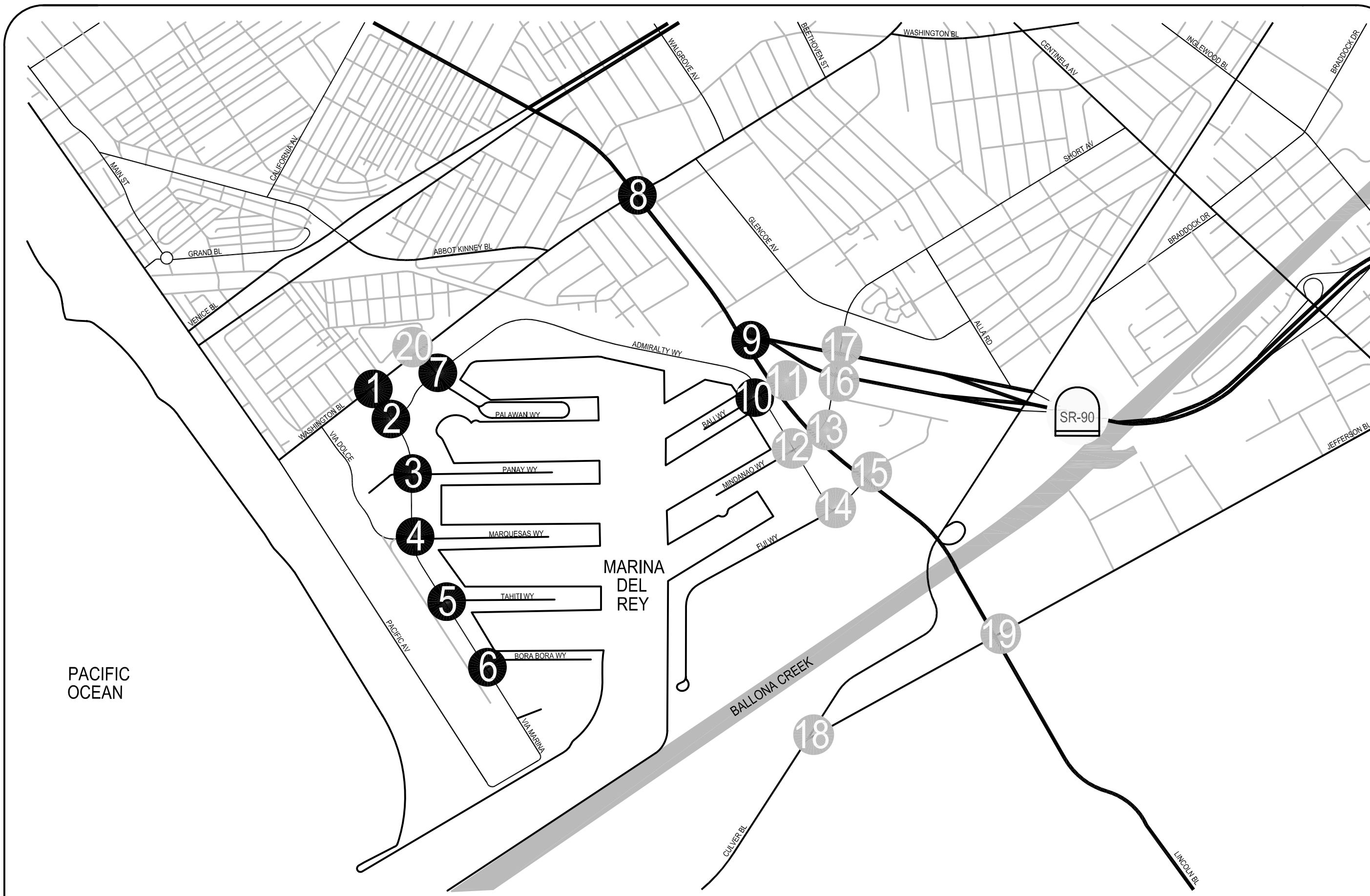
V/C = (152 + 0 + 355 + 368) / 1200 = 0.729 LOS C

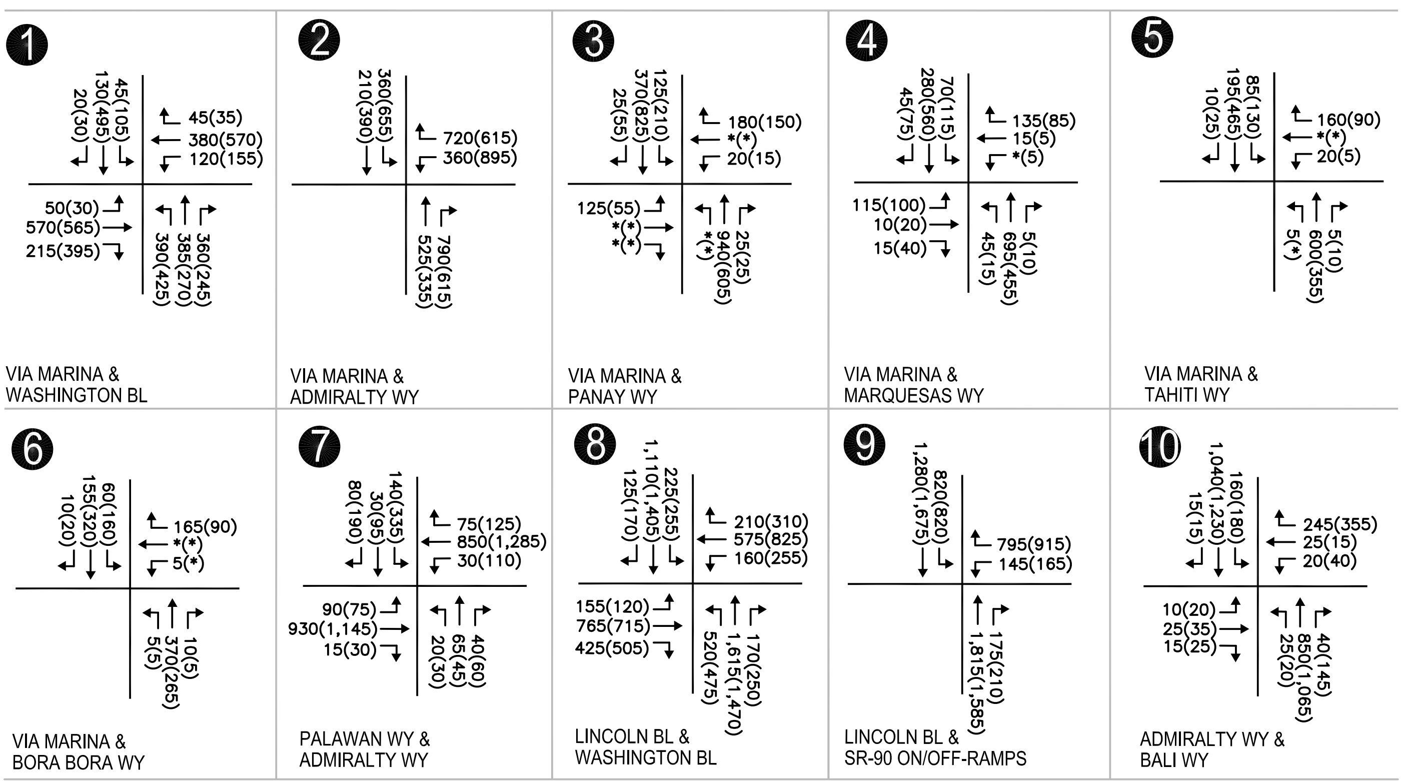
Developed by Chun Wong, 12:94

APPENDIX D

Future (2020) with Ambient Growth Conditions Traffic Volumes and Level of Service Worksheets

All signalized intersections include V/C credit of 0.10 to account from ATSAC and ATCS. ATCS credit of 0.03 is not automatically reflected on the capacity calculation worksheets.





LEGEND:

XXX(XXX) - AM(PM) PEAK HOUR TRAFFIC VOLUMES ROUNDED TO THE NEAREST 5 VEHICLES

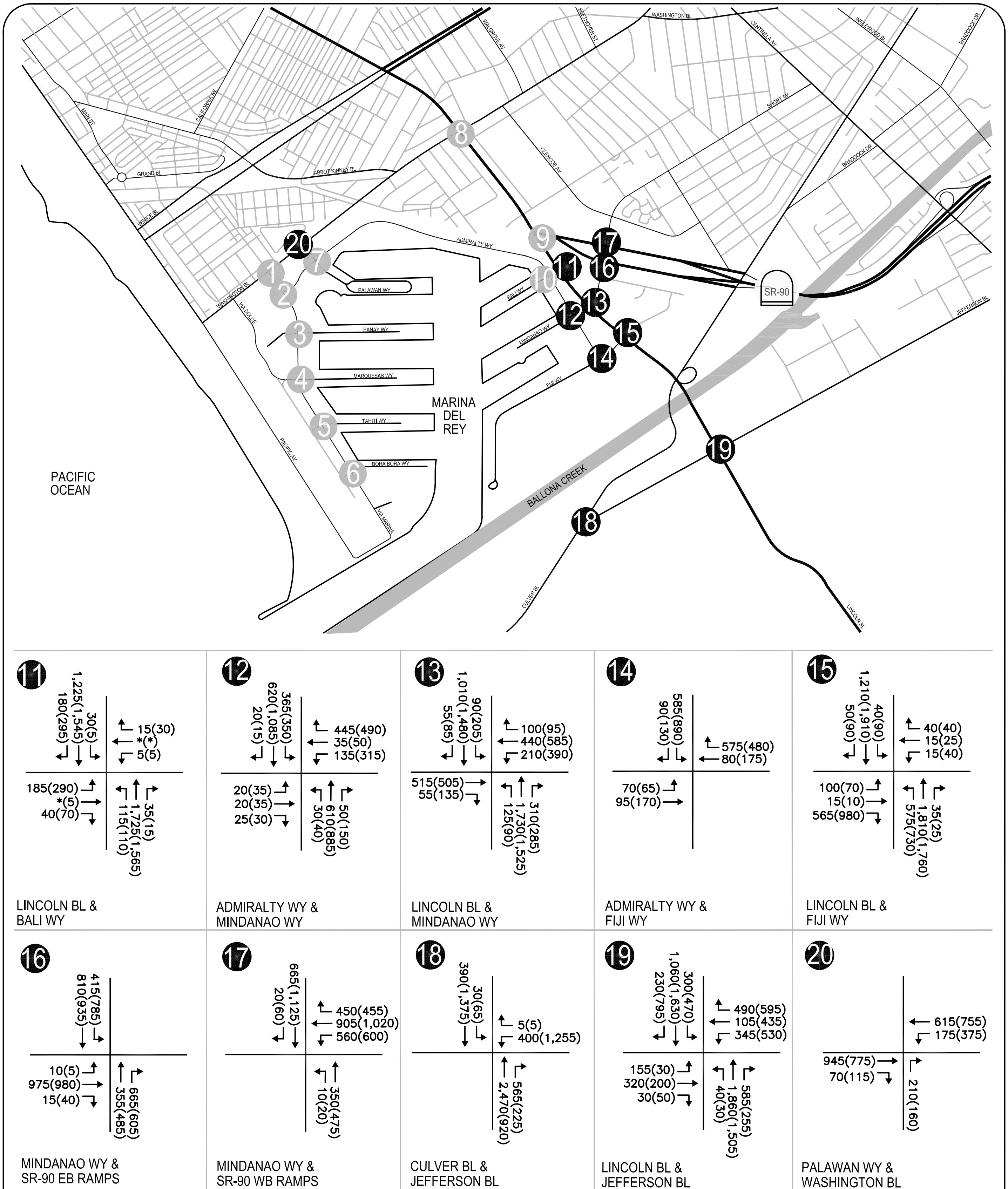
\# - STUDY INTERSECTION

* - NEGLIGIBLE VOLUME

N
Not to scale

APPENDIX D-1
FUTURE (2020) WITH AMBIENT GROWTH CONDITIONS
TRAFFIC VOLUMES

RAJU Associates, Inc.



LEGEND:

XXX(XXX) - AM(PM) PEAK HOUR TRAFFIC VOLUMES ROUNDED TO THE NEAREST 5 VEHICLES

- STUDY INTERSECTION

* - NEGLIGIBLE VOLUME

APPENDIX D-2
FUTURE (2020) WITH AMBIENT GROWTH CONDITIONS
TRAFFIC VOLUMES

RAJU Associates, Inc.

AM PEAK HOUR

LEVEL OF SERVICE WORKSHEETS

AMBNTAM

CalcaDB

March 10, 2010 ,Wednesday 11:53:11 AM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA / OCEAN AVE W/E: WASHINGTON BLVD I/S No: 1

AM/PM: AM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	388	386	361	47	130	21	121	378	43	49	572	215
AMBIENT												
RELATED												
PROJECT												
TOTAL	388	386	361	47	130	21	121	378	43	49	572	215

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	2	0	1	0	0	1	0	1	0	0	0	1	0	0	1	0	1	0	1	0	0	1	0	2	0	0	1	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	Auto	Split	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A:	B:
SouthBound	151	47
EastBound	286	49
WestBound	211	121
NorthBound	386	213

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ A(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ $\frac{386 \ □ \ 151 \ □ \ 121 \ □ \ 286}{□1425}$ □ 0.592 LOS □ A

Developed by Chun Wong, 12.94

AMBNTAM

CalcaDB

March 10, 2010 ,Wednesday 11:53:11 AM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: ADMIRALTY WY I/S No: 2

AM/PM: AM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	523	790	361	212	0	358	0	720	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	523	790	361	212	0	358	0	720	0	0	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	0	2	0	0	1	0	1	0	3	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Free	Prot-Fix	□none□	Split	OLA	□none□	□none□

Critical Movements Diagram

	A:	B:
SouthBound	71	361
EastBound	0	0
WestBound	35	197
NorthBound	262	0

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ $\frac{262 \ □ \ 361 \ □ \ 197 \ □ \ 0}{□1425}$ □ 0.505 LOS □ A

Developed by Chun Wong, 12.94

AMBNTAM

CalcaDB

March 10, 2010 ,Wednesday 11:53:11 AM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA | W/E: PANAY WY | I/S No: 3

AM/PM: AM | Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	942	23	124	369	25	20	0	181	127	1	2
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	942	23	124	369	25	20	0	181	127	1	2

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	0 1 0 0 0 1 0	0 0 0 1 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 131 B: 124

EastBound A: 130 B: 127

WestBound A: 181 B: 20

NorthBound A: 322 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (322 + 124 + 181 + 127) / 1500 = 0.433 LOS A

Developed by Chun Wong, 12/94

AMBNTAM

CalcaDB

March 10, 2010 ,Wednesday 11:53:11 AM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA | W/E: MARQUESAS WY | I/S No: 4

AM/PM: AM | Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	43	697	7	69	281	45	2	16	134	113	10	13
AMBIENT												
RELATED												
PROJECT												
TOTAL	43	697	7	69	281	45	2	16	134	113	10	13

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 0 1 0	0 1 0 0 1 0 0	1 0 1 0 0 1 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 141 B: 69

EastBound A: 13 B: 113

WestBound A: 134 B: 2

NorthBound A: 235 B: 43

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (235 + 69 + 134 + 113) / 1500 = 0.297 LOS A

Developed by Chun Wong, 12/94

AMBNTAM

CalcaDB

March 10, 2010 ,Wednesday 11:53:11 AM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: TAHITI WY I/S No: 5

AM/PM: AM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	6	601	5	87	197	12	20	2	162	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	6	601	5	87	197	12	20	2	162	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 1 0 0	1 0 1 0 1 0 0	0 1 0 0 1 0 0	0 0 0 0 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Split	Auto	none	none

Critical Movements Diagram

SouthBound A: 105 B: 87

EastBound A: 0 B: 0

WestBound A: 162 B: 20

NorthBound A: 306 B: 6

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (306 + 87 + 162 + 0) / 1500 = 0.300 LOS A

Developed by Chun Wong, 12/94

AMBNTAM

CalcaDB

March 10, 2010 ,Wednesday 11:53:11 AM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: BORA BORA WY I/S No: 6

AM/PM: AM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	5	371	10	61	157	10	6	1	165	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	5	371	10	61	157	10	6	1	165	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 1 0 0	1 0 1 0 1 0 0	0 0 0 1 0 0 0	0 0 0 0 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	none	none

Critical Movements Diagram

SouthBound A: 84 B: 61

EastBound A: 0 B: 0

WestBound A: 172 B: 6

NorthBound A: 193 B: 5

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (193 + 61 + 172 + 0) / 1200 = 0.355 LOS A

Developed by Chun Wong, 12/94

AMBNTAM

CalcaDB

March 10, 2010 ,Wednesday 11:53:11 AM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: ADMIRALTY WY I/S No: 7

AM/PM: AM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	20	66	38	138	29	80	30	849	75	88	932	17
AMBIENT												
RELATED												
PROJECT												
TOTAL	20	66	38	138	29	80	30	849	75	88	932	17

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	0	0	1	0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	0	1	0	1	0	1	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 80 B: 138

EastBound A: 475 B: 88

WestBound A: 462 B: 30

NorthBound A: 104 B: 20

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (104 □ 138 □ 462 □ 88) / □1500 □ 0.458 LOS □ A

Developed by Chun Wong, 12.94

AMBNTAM

CalcaDB

March 10, 2010 ,Wednesday 11:53:11 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: WASHINGTON BLVD I/S No: 8

AM/PM: AM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	518	1614	172	224	1111	127	161	576	210	153	766	424
AMBIENT												
RELATED												
PROJECT												
TOTAL	518	1614	172	224	1111	127	161	576	210	153	766	424

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	2	0	2	0	1	0	0	2	0	2	0	1	0	0	2	0	2	0	0	1	0	2	0	2	0	0	1	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	OLA

Critical Movements Diagram

SouthBound A: 413 B: 123

EastBound A: 383 B: 84

WestBound A: 288 B: 89

NorthBound A: 595 B: 285

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (595 □ 123 □ 89 □ 383) / □1375 □ 0.795 LOS □ C

Developed by Chun Wong, 12.94

AMBNTAM

CalcaDB

April 21, 2010 ,Wednesday 01:04:09 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: SR-90 ON/OFF RAMPS I/S No: 9

AM/PM: AM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	1816	175	822	1281	0	147	0	793	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	1816	175	822	1281	0	147	0	793	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 2 0 1 0 0	2 0 3 0 0 0 0	2 0 0 0 0 2 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Prot-Fix	□none□	Split	OLA	□none□	□none□

Critical Movements Diagram

	A	B
SouthBound	427	452
EastBound	0	0
WestBound	0	81
NorthBound	664	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (664 □ 452 □ 81 □ 0) / □1425 □ 0.770 LOS □ C

Developed by Chun Wong, 12:94

AMBNTAM

CalcaDB

April 21, 2010 ,Wednesday 01:04:09 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: BALI WY I/S No: 10

AM/PM: AM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	23	850	42	162	1038	16	20	23	246	10	25	13
AMBIENT									-162			
RELATED												
PROJECT												
TOTAL	23	850	42	162	1038	16	20	23	84	10	25	13

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	1 0 1 0 1 0 0	1 0 0 0 1 1 0	0 1 0 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	OLA	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	527	162
EastBound	24	10
WestBound	54	20
NorthBound	446	23

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (446 □ 162 □ 54 □ 10) / □1425 □ 0.402 LOS □ A

Developed by Chun Wong, 12:94

AMBNTAM

CalcaDB

March 10, 2010 ,Wednesday 11:53:11 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: BALI WY I/S No: 11

AM/PM: AM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	117	1723	33	28	1227	178	3	0	14	183	2	42
AMBIENT												
RELATED												
PROJECT												
TOTAL	117	1723	33	28	1227	178	3	0	14	183	2	42

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	2	0	1	0	0	1	0	2	0	1	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	Auto	Split	Auto

Critical Movements Diagram

SouthBound A: 468 B: 28

EastBound A: 93 B: 93

WestBound A: 17 B: 3

NorthBound A: 585 B: 117

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C 585 28 17 93 / 1375 0.456 LOS A

Developed by Chun Wong, 12/94

AMBNTAM

CalcaDB

March 10, 2010 ,Wednesday 11:53:11 AM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: MINDANAO WY I/S No: 12

AM/PM: AM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	29	612	52	367	620	20	136	36	447	22	19	26
AMBIENT												
RELATED												
PROJECT												
TOTAL	29	612	52	367	620	20	136	36	447	22	19	26

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	1	0	1	0	0	1	0	1	0	1	0	0	1	1	0	0	0	1	0	1	0	0	0	1	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	OLA	Split	Auto

Critical Movements Diagram

SouthBound A: 320 B: 367

EastBound A: 45 B: 22

WestBound A: 86 B: 86

NorthBound A: 332 B: 29

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C 332 367 86 45 / 1375 0.534 LOS A

Developed by Chun Wong, 12/94

AMBNTAM

CalcaDB

March 10, 2010 ,Wednesday 11:53:11 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: MINDANAO WY I/S No: 13

AM/PM: AM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	123	1729	311	92	1011	57	209	439	100	0	517	53
AMBIENT												
RELATED												
PROJECT												
TOTAL	123	1729	311	92	1011	57	209	439	100	0	517	53

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 3 0 0 1 0	1 0 2 0 1 0 0	2 0 1 0 1 0 0	0 0 1 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	356	92
EastBound	285	0
WestBound	270	115
NorthBound	576	123

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (576 + 92 + 115 + 285) / 1375 = 0.707 LOS C

Developed by Chun Wong, 12/94

AMBNTAM

CalcaDB

March 10, 2010 ,Wednesday 11:53:11 AM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: FIJI WY I/S No: 14

AM/PM: AM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	0	585	0	91	0	81	577	71	95	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	585	0	91	0	81	577	71	95	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 0 0 0 0	2 0 0 0 0 1 0	0 0 1 0 0 1 0	1 0 2 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	none	none	Split	Free	Perm	Free	Perm	none

Critical Movements Diagram

	A	B
SouthBound	0	322
EastBound	48	71
WestBound	81	0
NorthBound	0	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (0 + 322 + 81 + 71) / 1500 = 0.246 LOS A

Developed by Chun Wong, 12/94

AMBNTAM

CalcaDB

March 10, 2010 ,Wednesday 11:53:11 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: FIJI WY I/S No: 15

AM/PM: AM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	576	1810	35	41	1209	52	16	14	41	98	17	563
AMBIENT												
RELATED												
PROJECT												
TOTAL	576	1810	35	41	1209	52	16	14	41	98	17	563

LANE	NB	SB	WB	EB
	2 0 2 0 1 0 0	1 0 2 0 1 0 0	0 0 0 1 0 0 0	1 0 1 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Free

Critical Movements Diagram

SouthBound A: 420 B: 41

EastBound A: 17 B: 98

WestBound A: 71 B: 16

NorthBound A: 615 B: 317

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C 317 420 71 98 / 1425 0.566 LOS A

Developed by Chun Wong, 12/94

AMBNTAM

CalcaDB

March 10, 2010 ,Wednesday 11:53:11 AM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 EB ON/OFF RAMPS I/S No: 16

AM/PM: AM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	353	664	413	812	0	0	0	0	9	975	13
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	353	664	413	812	0	0	0	0	9	975	13

LANE	NB	SB	WB	EB
	0 0 1 0 1 1 0	2 0 2 0 0 0 0	0 0 0 0 0 0 0	1 0 1 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Prot-Fix	none	none	none	Split	Auto

Critical Movements Diagram

SouthBound A: 406 B: 227

EastBound A: 494 B: 9

WestBound A: 0 B: 0

NorthBound A: 339 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C 339 227 0 494 / 1425 0.674 LOS B

Developed by Chun Wong, 12/94

AMBNTAM

CalcaDB

March 10, 2010 ,Wednesday 11:53:11 AM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 WB ON/OFF RAMPS I/S No: 17

AM/PM: AM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	12	351	0	0	664	21	561	906	448	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	12	351	0	0	664	21	561	906	448	0	0	0

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	1 0 2 0 0 0 0	0 0 2 0 1 0 0	1 1 1 0 0 1 0	0 0 0 0 0 0 0

SIGNAL	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
	Prot-Fix	none	Perm	Auto	Split	Auto	none	none

Critical Movements Diagram

	A	B
SouthBound	228	0
EastBound	0	0
WestBound	489	489
NorthBound	176	12

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (12 + 228 + 489 - 0) / 1425 = 0.442 LOS A

Developed by Chun Wong, 12.94

AMBNTAM

CalcaDB

March 10, 2010 ,Wednesday 11:53:11 AM

INTERSECTION DATA SUMMARY SHEET

N/S: CULVER BLVD W/E: JEFFERSON BLVD I/S No: 18

AM/PM: AM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	2469	565	30	391	0	398	0	4	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	2469	565	30	391	0	398	0	4	0	0	0

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	0 0 2 0 0 1 0	0 1 1 0 0 0 0	2 0 0 0 0 1 0	0 0 0 0 0 0 0

SIGNAL	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
	Perm	Free	Perm	none	Split	Auto	none	none

Critical Movements Diagram

	A	B
SouthBound	286	30
EastBound	0	0
WestBound	4	219
NorthBound	1235	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (1235 + 30 + 219 - 0) / 1500 = 0.919 LOS E

Developed by Chun Wong, 12.94

AMBNTAM

CalcaDB

March 10, 2010 ,Wednesday 11:53:11 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: JEFFERSON BLVD I/S No: 19

AM/PM: AM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	38	1861	584	298	1061	229	346	107	491	157	320	28
AMBIENT												
RELATED												
PROJECT												
TOTAL	38	1861	584	298	1061	229	346	107	491	157	320	28

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	4	0	0	1	0	2	0	3	0	1	0	0	2	0	2	0	0	2	0	1	0	2	0	1	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	Auto

Critical Movements Diagram

	A	B
SouthBound	323	164
EastBound	116	157
WestBound	106	190
NorthBound	465	38

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (465 + 164 + 190 + 116) / 1375 = 0.610 LOS B

Developed by Chun Wong, 12/94

AMBNTAM

CalcaDB

March 10, 2010 ,Wednesday 11:53:11 AM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: WASHINGTON BLVD I/S No: 20

AM/PM: AM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	212	0	0	0	177	616	0	0	947	70
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	212	0	0	0	177	616	0	0	947	70

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	2	0	0	1	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Split	Auto	none	none	Perm	none	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	0	0
EastBound	474	0
WestBound	308	177
NorthBound	212	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (212 + 0 + 177 + 474) / 1200 = 0.719 LOS C

Developed by Chun Wong, 12/94

PM PEAK HOUR

LEVEL OF SERVICE WORKSHEETS

AMBNTPM

CalcaDB

March 10, 2010 ,Wednesday 11:53:34 AM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA / OCEAN AVE W/E: WASHINGTON BLVD I/S No: 1

AM/PM: PM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	424	272	244	106	493	31	154	572	33	31	567	397
AMBIENT												
RELATED												
PROJECT												
TOTAL	424	272	244	106	493	31	154	572	33	31	567	397

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 1 0 0 1 0	1 0 0 0 1 0 0	1 0 1 0 1 0 0	1 0 2 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	Auto	Split	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 524 B: 106

EastBound A: 284 B: 31

WestBound A: 303 B: 154

NorthBound A: 272 B: 233

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ A(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (272 □ 524 □ 154 □ 284) / □1425 □ 0.796 LOS □ C

Developed by Chun Wong, 12:94

AMBNTPM

CalcaDB

March 10, 2010 ,Wednesday 11:53:34 AM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: ADMIRALTY WY I/S No: 2

AM/PM: PM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	337	615	657	388	0	897	0	617	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	337	615	657	388	0	897	0	617	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 2 0 0 1 0	1 0 3 0 0 0 0	2 0 0 0 0 2 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Free	Prot-Fix	□none□	Split	OLA	□none□	□none□

Critical Movements Diagram

SouthBound A: 129 B: 657

EastBound A: 0 B: 0

WestBound A: 0 B: 493

NorthBound A: 169 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (169 □ 657 □ 493 □ 0) / □1425 □ 0.856 LOS □ D

Developed by Chun Wong, 12:94

AMBNTPM

CalcaDB

March 10, 2010 ,Wednesday 11:53:34 AM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: PANAY WY I/S No: 3

AM/PM: PM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	1	604	27	210	827	53	15	2	151	53	1	1
AMBIENT												
RELATED												
PROJECT												
TOTAL	1	604	27	210	827	53	15	2	151	53	1	1

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	0 1 0 0 0 1 0	0 0 0 1 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	293	210
EastBound	55	53
WestBound	151	15
NorthBound	210	1

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (210 + 210 + 151 + 53) / 1500 = 0.346 LOS A

Developed by Chun Wong, 12/94

AMBNTPM

CalcaDB

March 10, 2010 ,Wednesday 11:53:34 AM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: MARQUESAS WY I/S No: 4

AM/PM: PM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	16	454	11	117	560	75	5	5	86	98	19	38
AMBIENT												
RELATED												
PROJECT												
TOTAL	16	454	11	117	560	75	5	5	86	98	19	38

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 0 1 0	0 1 0 0 1 0 0	1 0 1 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	280	117
EastBound	38	98
WestBound	86	5
NorthBound	155	16

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (16 + 280 + 86 + 98) / 1500 = 0.250 LOS A

Developed by Chun Wong, 12/94

AMBNTPM

CalcaDB

March 10, 2010 ,Wednesday 11:53:34 AM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: TAHITI WY I/S No: 5

AM/PM: PM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	2	357	12	131	467	25	6	0	90	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	2	357	12	131	467	25	6	0	90	0	0	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	1	0	0	1	0	0	1	0	1	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Split	Auto	□none□	□none□

Critical Movements Diagram

SouthBound
A: 246
B: 131

EastBound
A: 0
B: 0

WestBound
A: 90
B: 6

NorthBound
A: 187
B: 2

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (187 □ 131 □ 90 □ 0) / □1500 □ 0.202 LOS □ A

Developed by Chun Wong, 12:94

AMBNTPM

CalcaDB

March 10, 2010 ,Wednesday 11:53:34 AM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: BORA BORA WY I/S No: 6

AM/PM: PM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	3	267	5	160	319	20	1	0	92	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	3	267	5	160	319	20	1	0	92	0	0	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	1	0	0	1	0	0	1	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	□none□	□none□

Critical Movements Diagram

SouthBound
A: 170
B: 160

EastBound
A: 0
B: 0

WestBound
A: 93
B: 1

NorthBound
A: 139
B: 3

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (139 □ 160 □ 93 □ 0) / 1200 □ 0.327 LOS □ A

Developed by Chun Wong, 12:94

AMBNTPM

CalcaDB

March 10, 2010 ,Wednesday 11:53:34 AM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: ADMIRALTY WY I/S No: 7

AM/PM: PM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	31	45	61	337	94	192	110	1286	125	75	1143	29
AMBIENT												
RELATED												
PROJECT												
TOTAL	31	45	61	337	94	192	110	1286	125	75	1143	29

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	1 0 0 0 1 0 0	1 0 1 0 0 1 0	1 0 1 0 1 0 0	1 0 1 0 1 0 0

SIGNAL	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 192 B: 337

EastBound A: 586 B: 75

WestBound A: 706 B: 110

NorthBound A: 106 B: 31

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
  ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C $\frac{106 + 337 + 706 + 75}{1500}$ 0.746 LOS C

Developed by Chun Wong, 12/94

AMBNTPM

CalcaDB

March 10, 2010 ,Wednesday 11:53:34 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: WASHINGTON BLVD I/S No: 8

AM/PM: PM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	475	1472	250	253	1404	169	256	826	312	122	716	503
AMBIENT												
RELATED												
PROJECT												
TOTAL	475	1472	250	253	1404	169	256	826	312	122	716	503

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	2 0 2 0 1 0 0	2 0 2 0 1 0 0	2 0 2 0 0 1 0	2 0 2 0 0 1 0

SIGNAL	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	OLA

Critical Movements Diagram

SouthBound A: 524 B: 139

EastBound A: 358 B: 67

WestBound A: 413 B: 141

NorthBound A: 574 B: 261

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
  ATSAC Benefit

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C $\frac{261 + 524 + 141 + 358}{1375}$ 0.864 LOS D

Developed by Chun Wong, 12/94

AMBNTPM

CalcaDB

April 21, 2010 ,Wednesday 01:04:38 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD   W/E: SR-90 ON/OFF RAMPS   I/S No: 9

AM/PM: PM   Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	1585	211	822	1675	0	164	0	913	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	1585	211	822	1675	0	164	0	913	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 2 0 1 0 0	2 0 3 0 0 0 0	2 0 0 0 0 2 0	0 0 0 0 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Prot-Fix	□none□	Split	OLA	□none□	□none□

Critical Movements Diagram

	A	B
SouthBound	558	452
EastBound	0	0
WestBound	50	90
NorthBound	599	0

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (599 □ 452 □ 90 □ 0) / □1425 □ 0.731   LOS □ C

Developed by Chun Wong, 12/94

AMBNTPM

CalcaDB

April 21, 2010 ,Wednesday 01:04:38 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY   W/E: BALI WY   I/S No: 10

AM/PM: PM   Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	19	1066	143	181	1230	16	42	16	356	18	35	26
AMBIENT									-181			
RELATED												
PROJECT												
TOTAL	19	1066	143	181	1230	16	42	16	175	18	35	26

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	1 0 1 0 1 0 0	1 0 0 0 1 1 0	0 1 0 0 1 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	OLA	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	623	181
EastBound	40	18
WestBound	96	42
NorthBound	605	19

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (605 □ 181 □ 96 □ 18) / □1425 □ 0.562   LOS □ A

Developed by Chun Wong, 12/94

AMBNTPM

CalcaDB

March 10, 2010 ,Wednesday 11:53:34 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: BALI WY I/S No: 11

AM/PM: PM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	110	1566	16	6	1546	293	5	0	31	288	3	72
AMBIENT												
RELATED												
PROJECT												
TOTAL	110	1566	16	6	1546	293	5	0	31	288	3	72

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	2	0	1	0	0	1	0	2	0	1	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	Auto	Split	Auto

Critical Movements Diagram

SouthBound A: 613 B: 6

EastBound A: 146 B: 146

WestBound A: 36 B: 5

NorthBound A: 527 B: 110

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (110 □ 613 □ 36 □ 146) / □1375 □ 0.588 LOS □ A

Developed by Chun Wong, 12.94

AMBNTPM

CalcaDB

March 10, 2010 ,Wednesday 11:53:34 AM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: MINDANAO WY I/S No: 12

AM/PM: PM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	42	885	148	351	1085	16	317	49	488	36	35	30
AMBIENT												
RELATED												
PROJECT												
TOTAL	42	885	148	351	1085	16	317	49	488	36	35	30

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	1	0	1	0	0	1	0	1	0	1	0	0	1	1	0	0	0	1	0	1	0	0	0	1	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	OLA	Split	Auto

Critical Movements Diagram

SouthBound A: 551 B: 351

EastBound A: 65 B: 36

WestBound A: 183 B: 183

NorthBound A: 517 B: 42

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (517 □ 351 □ 183 □ 65) / □1375 □ 0.742 LOS □ C

Developed by Chun Wong, 12.94

AMBNTPM

CalcaDB

March 10, 2010 ,Wednesday 11:53:34 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: MINDANAO WY I/S No: 13

AM/PM: PM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	89	1526	284	203	1482	84	392	583	94	0	507	137
AMBIENT												
RELATED												
PROJECT												
TOTAL	89	1526	284	203	1482	84	392	583	94	0	507	137

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	3	0	0	1	0	1	0	2	0	1	0	0	2	0	1	0	1	0	0	0	0	1	0	1	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 522 B: 203

EastBound A: 322 B: 0

WestBound A: 339 B: 216

NorthBound A: 509 B: 89

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (509 + 203 + 216 + 322) / 1375 = 0.839 LOS D

Developed by Chun Wong, 12/94

AMBNTPM

CalcaDB

March 10, 2010 ,Wednesday 11:53:34 AM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: FIJI WY I/S No: 14

AM/PM: PM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	0	892	0	129	0	173	478	65	171	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	892	0	129	0	173	478	65	171	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	2	0	0	0	

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	none	none	Split	Free	Perm	Free	Perm	none

Critical Movements Diagram

SouthBound A: 0 B: 491

EastBound A: 86 B: 65

WestBound A: 173 B: 0

NorthBound A: 0 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (0 + 491 + 173 + 65) / 1500 = 0.416 LOS A

Developed by Chun Wong, 12/94

AMBNTPM

CalcaDB

March 10, 2010 ,Wednesday 11:53:34 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: FIJI WY I/S No: 15

AM/PM: PM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	731	1762	24	92	1910	89	42	23	40	70	8	981
AMBIENT												
RELATED												
PROJECT												
TOTAL	731	1762	24	92	1910	89	42	23	40	70	8	981

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 2 0 1 0 0	1 0 2 0 1 0 0	0 0 0 1 0 0 0	1 0 1 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Free

Critical Movements Diagram

	A	B
SouthBound	666	92
EastBound	8	70
WestBound	105	42
NorthBound	595	402

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (402 + 666 + 105 + 70) / 1425 = 0.802 LOS D

Developed by Chun Wong, 12/94

AMBNTPM

CalcaDB

March 10, 2010 ,Wednesday 11:53:34 AM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 EB ON/OFF RAMPS I/S No: 16

AM/PM: PM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	484	603	783	936	0	0	0	0	7	982	41
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	484	603	783	936	0	0	0	0	7	982	41

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 1 0 1 1 0	2 0 2 0 0 0 0	0 0 0 0 0 0 0	1 0 1 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Prot-Fix	none	none	none	Split	Auto

Critical Movements Diagram

	A	B
SouthBound	468	431
EastBound	512	7
WestBound	0	0
NorthBound	362	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (362 + 431 + 0 + 512) / 1425 = 0.846 LOS D

Developed by Chun Wong, 12/94

AMBNTPM

CalcaDB

March 10, 2010 ,Wednesday 11:53:34 AM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY   W/E: SR-90 WB ON/OFF RAMPS   I/S No: 17

AM/PM: PM   Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	18	473	0	0	1125	60	600	1022	453	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	18	473	0	0	1125	60	600	1022	453	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 0 0 0	0 0 2 0 1 0 0	1 1 1 0 0 1 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	none	Perm	Auto	Split	Auto	none	none

Critical Movements Diagram

	A	B
SouthBound	395	0
EastBound	0	0
WestBound	541	541
NorthBound	237	18

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) A(E/B)

$$V/C = \frac{18 + 395 + 541 + 0}{1425} = 0.599$$

LOS A

Developed by Chun Wong, 12/94

AMBNTPM

CalcaDB

March 10, 2010 ,Wednesday 11:53:34 AM

INTERSECTION DATA SUMMARY SHEET

N/S: CULVER BLVD   W/E: JEFFERSON BLVD   I/S No: 18

AM/PM: PM   Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	918	226	65	1373	0	1257	0	3	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	918	226	65	1373	0	1257	0	3	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 2 0 0 1 0	0 1 1 0 0 0 0	2 0 0 0 0 1 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Free	Perm	none	Split	Auto	none	none

Critical Movements Diagram

	A	B
SouthBound	882	65
EastBound	0	0
WestBound	3	691
NorthBound	459	0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

$$V/C = \frac{0 + 882 + 691 + 0}{1500} = 0.979$$

LOS E

Developed by Chun Wong, 12/94

AMBNTPM

CalcaDB

March 10, 2010 ,Wednesday 11:53:34 AM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: JEFFERSON BLVD I/S No: 19

AM/PM: PM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	28	1507	257	468	1628	794	528	437	596	32	200	52
AMBIENT												
RELATED												
PROJECT												
TOTAL	28	1507	257	468	1628	794	528	437	596	32	200	52

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 4 0 0 1 0	2 0 3 0 1 0 0	2 0 2 0 0 2 0	1 0 2 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	Auto

Critical Movements Diagram

SouthBound A: 794 B: 257

EastBound A: 84 B: 32

WestBound A: 219 B: 290

NorthBound A: 377 B: 28

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C $\frac{28 \quad 794 \quad 290 \quad 84}{1375}$ 0.800 LOS C

Developed by Chun Wong, 12.94

AMBNTPM

CalcaDB

March 10, 2010 ,Wednesday 11:53:34 AM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: WASHINGTON BLVD I/S No: 20

AM/PM: PM Comments: AMBIENT (2020) CONDITIONS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	160	0	0	0	375	755	0	0	776	117
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	160	0	0	0	375	755	0	0	776	117

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 0 0 1 0	0 0 0 0 0 0 0	1 0 2 0 0 0 0	0 0 2 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	Auto	none	none	Perm	none	Perm	Auto

Critical Movements Diagram

SouthBound A: 0 B: 0

EastBound A: 388 B: 0

WestBound A: 378 B: 375

NorthBound A: 160 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C $\frac{160 \quad 0 \quad 375 \quad 388}{1200}$ 0.769 LOS C

Developed by Chun Wong, 12.94

APPENDIX E

Approved LCP Development and Proposed LCP Amendment Development Information

TABLE E-1
COMPARISON OF APPROVED LCP DEVELOPMENT AND PROPOSED LCP AMENDMENT DEVELOPMENT

			APPROVED DEVELOPMENT				PROPOSED LCP AMENDMENT	
DZ#	**DZ Name**	**Parcels in DZ**	**Redevelopment Permitted in LCP**	**Redevelopment Granted**	**Redevelopment Remaining**	**Redevelopment Remaining - Not Built**	**Redevelopment Proposed - Pipeline Projects Only**	**PROPOSED LCP BUILDOUT (including Pipeline Projects)**
1	Bora Bora	1, 3, 112, 113,BR	610 DUs	**P112** - 120 DUs	490 DUs	393 DUs	None	281 DUs
2	Tahiti	7,8,9,111	275 DUs 288 Hotel Rooms 76 Slips	None	275 DUs 288 Hotel Rooms 76 Slips	275 DUs 288 Hotel Rooms 76 Slips	None	288 Hotel Rooms
3	Marquesas	10,12,13, FF	320 DUs 15 KSF Retail 76 Slips	**P12** - 317 DUs **P12** - 2 KSF Retail	3 DUs 13 KSF Retail 76 Slips	3 DUs 13 KSF Retail 76 Slips	**P10/FF [1]** - 390 Dus	390 DUs 13 KSF Retail
4	Panay	15,18,20,21, 22,GR	347 DUs 75 Congregate Care Units (CCUs) 10 KSF Retail 76 Slips	**P15** - 297 DUs **P18** - 68 DUs **P20** - 99 DUs **P18** - 60 CCUs **P15** - 8 KSF Retail	(20) DUs 15 CCUs 2 KSF Retail 76 Slips	**P15** - 297 DUs 15 CCUs 2 KSF Retail 76 Slips **P15** - 8 KSF Retail	None	297 DUs 15 CCUs 10 KSF Retail
5	Palawan/Beach	27,28,30,33, 91,97,140, 141,145,IR,H, JS,NR	180 DUs 200 Hotel Rooms 42 KSF Retail 410 Restaurant Seats	**P140** - 108 DUs **P27** - 69 Hotel Rooms	72 DUs 131 Hotel Rooms 42 KSF Retail 410 Restaurant Seats	72 DUs 131 Hotel Rooms 42 KSF Retail 410 Restaurant Seats	**P33/NR [2]** - 292 Dus 32.4 KSF commercial 323 Restaurant Seats	292 DUs 217 Hotel Rooms 37 KSF Retail 410 Restaurant Seats
6	Oxford	125,128,129 OT,P,Q,RR	Fire Station Expansion	None	Fire Stn Expansion	Fire Stn Expansion	**P-OT [3]**- 114 Sr. Facility and 5 KSF Retail	Fire Stn Expansion 114 Room Sr. Facility 5 KSF Retail
7	Admiralty	40,94,130, 131,132, 133,134,SS	200 Hotel Rooms 275 Restaurant Seats 32 KSF Office 3 KSF Library	None	200 Hotel Rooms 275 Restaurant Seats 32 KSF Office 3 KSF Library	200 Hotel Rooms 275 Restaurant Seats 32 KSF Office 3 KSF Library	None	223 Restaurant Seats 3 KSF Library
8	Bali	41,42,43,44, 75,76,150, UR	382 Hotel Rooms 40 KSF Conference Center 75 KSF Visitor Serving Commercial (VSC) 3 KSF Marine Science 500 Restaurant Seats Ferry Terminal Site 86 Slips	None	382 Hotel Rooms 40 KSF Conference 75 KSF VSC 3 KSF Marine Science 500 Restaurant Seats Ferry Terminal Site 86 Slips	382 Hotel Rooms 40 KSF Conference 75 KSF VSC 3 KSF Marine Science 500 Restaurant Seats Ferry Terminal Site 86 Slips	None	40.246 KSF VSC
9	Mindanao	47,48,49,50, 52,53, 54,77,83, EE,GG	14.5 KSF Retail 26 KSF Office	**P50** - 6.448 KSF	8.052 KSF Retail 26 KSF Office	8.052 KSF Retail 26 KSF Office	**P49** - Opt. 1. - 135 KSF VSC Opt. 2. - 116.495 KSF VSC + 255 Dus Opt. 3 - up to 26 KSF DBH Adm. Bldg. w/either Opt1 or Opt 2. **P52/GG [4]** - 375 Dry Stack Spaces, 3.08 KSF Office and 3.35 KSF Sheriff Boatwright	116.495 KSF VSC 255 DUs 26 KSF Office 375 Dry Stack Spaces
10	Village	55,56,61, BB,W	20 KSF Retail 350 Restaurant Seats Ferry Terminal Site	Existing at **P55/56/W** 15 KSF Retail 651 Restaurant Seats	20 KSF Retail 350 Restaurant Seats Ferry Terminal Site	20 KSF Retail 350 Restaurant Seats Ferry Terminal Site	None	20 KSF Retail (net) 350 Restaurant Seats (net) Ferry Teminal Site
11	Harbor Gateway	62,64,65	255 DUs 34 Slips	None	255 DUs 34 Slips	255 DUs 34 Slips	None	None
12	Via Marina	95,100,101,102, 103, 104, DS, LLS, AL-1, K-6	530 DUs 30 KSF Retail 340 Restaurant Seats	**P100/101** - 342 DUs	188 DUs 30 KSF Retail 340 Restaurant Seats	188 DUs 30 KSF Retail 340 Restaurant Seats **P100/101** - 342 DUs	None	529 DUs 30 KSF Retail 340 Restaurant Seats
13	North Shore	XT	None	None	None	None	None	None
14	Fiji Way	51,200	2 KSF Retail	None	2 KSF Retail	2 KSF Retail	None	2 KSF Retail

[1] Parcel FF proposed to become Parcel 14.
[2] Parcel NR proposed to be merged into Parcel 33.
[3] Parcel OT proposed to become Parcel 147.
[4] Parcel GG proposed to be merged into Parcel 52.

TABLE E-2
CORRESPONDENCE BETWEEN APPROVED LCP DZ AND PROPOSED LCP AMENDMENT MDZ

APPROVED LCP DEVELOPMENT ZONES (DZs)

DZ□	DZ Name	Parcels in DZ
1	Bora Bora	1, 3, 112, 113, BR
2	Tahiti	7, 8, 9, 111
3	Marquesas	10, 12, 13, FF
4	Panay	15, 18, 20, 21, 22, GR
5	Palawan□Beach	27, 28, 30, 33, 91, 97, 140, 141, 145 IR, H, JS, NR
6	Oxford	125, 128, 129, OT, P, Q, RR
7	Admiralty	40, 94, 130, 131, 132, 133, 134, SS
8	Bali	41, 42, 43, 44, 75, 76, 150, UR
9	Mindanao	47,48,49,50, 52, 53, 54, 77, 83, EE, GG
10	Fisherman's Village	55, 56, 61, BB, W
11	Harbor Gateway	62, 64, 65
12	Via Marina	95,100,101,102, 103, 104, DS, LLS, AL-1, K-6
13	North Shore	XT
14	Fiji Way	51,200

PROPOSED LCP AMENDMENT
MAJOR DEVELOPMENT ZONES (MDZs)

MDZ□	Parcels in MDZ□□
1	1, 3, 112, 113,BR,7,8,9,111 10,12,13,FF,15,18,20,95, 100,101,102,103,104,DS, LLS, AL-1, K-6
2	21,22,GR,27,28,30,33,91, 97,140,141,145,IR,H,JS,NR 125,128,129,OT,P,Q,RR
3	40,94,130,131,132,133,134 SS,41,42,43,44,75,76,150 UR,47,48,49,50,52,53,54, 77,83,EE,GG,55,56,61,BB, W,62,64,65,XT,51,200

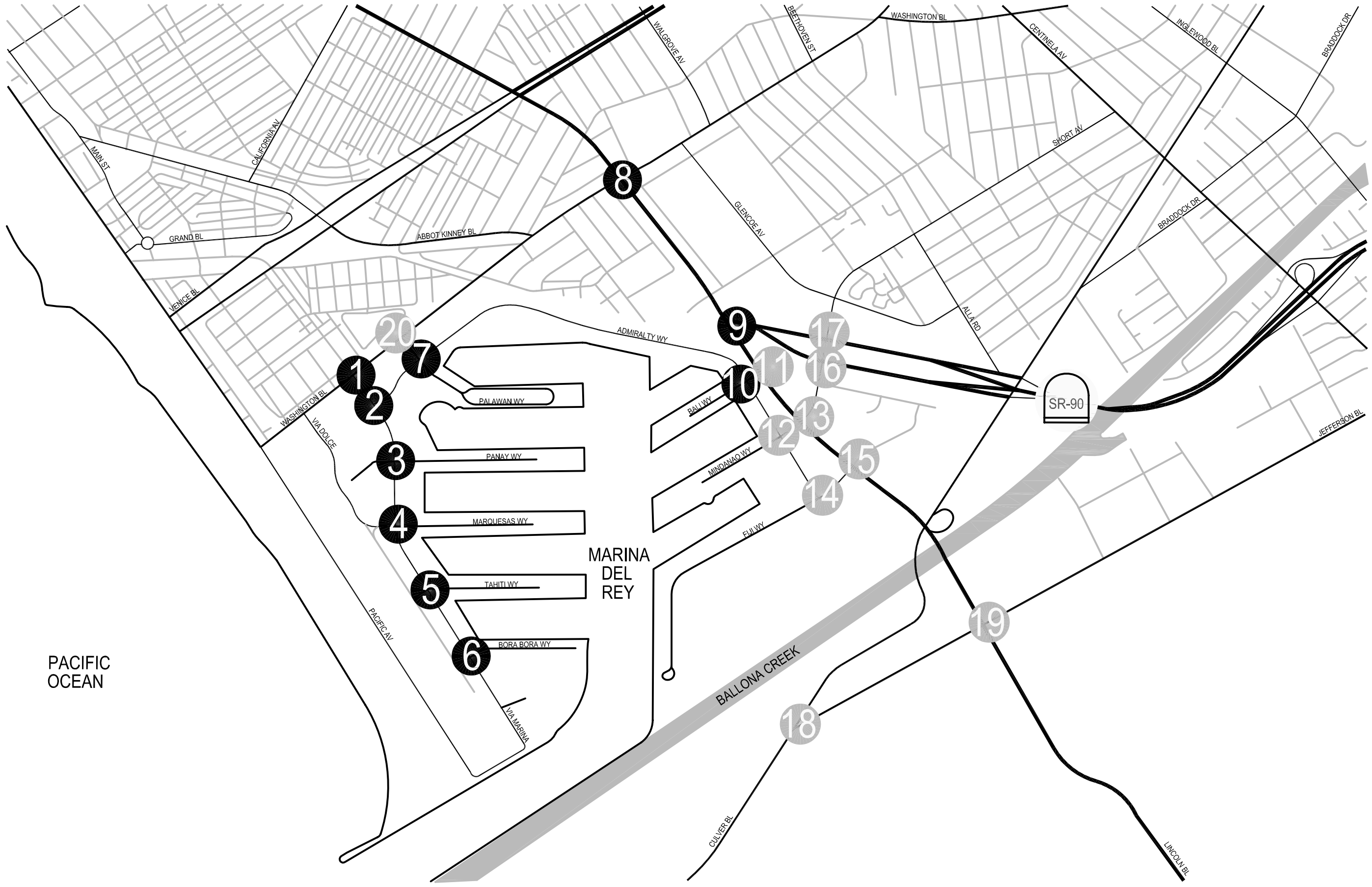
MDZ□	Parcels in MDZ□□	DZ □From Approved LCP
1	1, 3, 112, 113,BR,7,8,9,111 10,12,13,FF,15,18,20,95, 100,101,102,103,104,DS, LLS, AL-1, K-6	1, 2, 3, 4□, 12
2	21,22,GR,27,28,30,33,91, 97,140,141,145,IR,H,JS,NR 125,128,129,OT,P,Q,RR	4□, 5, 6
3	40,94,130,131,132,133,134 SS,41,42,43,44,75,76,150 UR,47,48,49,50,52,53,54, 77,83,EE,GG,55,56,61,BB, W,62,64,65,XT,51,200	7, 8, 9, 10, 11, 13, 14

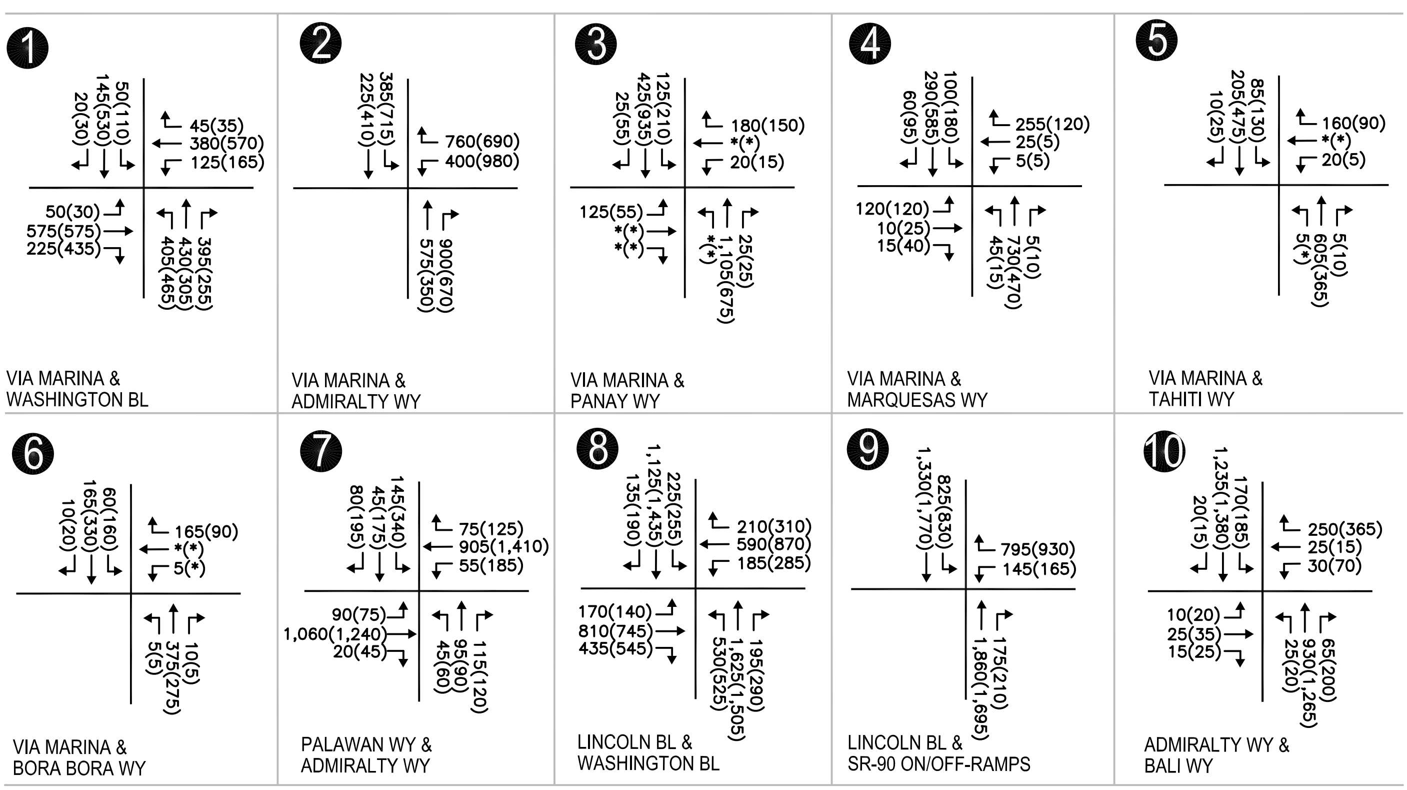
Notes:
□Portions of these are shared between two MDZs.
□□Parcel FF proposed to become Parcel 14.
□□Parcel NR proposed to be merged into Parcel 33.
□□Parcel OT proposed to become Parcel 147.
□□Parcel GG proposed to be merged into Parcel 52.

APPENDIX F

Ambient (2020) Conditions with Pipeline Projects Traffic Volumes and Level of Service Worksheets

*All signalized intersections include V/C credit of 0.10 to account from ATSAC and ATCS. ATCS credit of 0.03 is not automatically reflected on the capacity calculation worksheets.





LEGEND:

XXX(XXX) - AM(PM) PEAK HOUR TRAFFIC VOLUMES ROUNDED TO THE NEAREST 5 VEHICLES

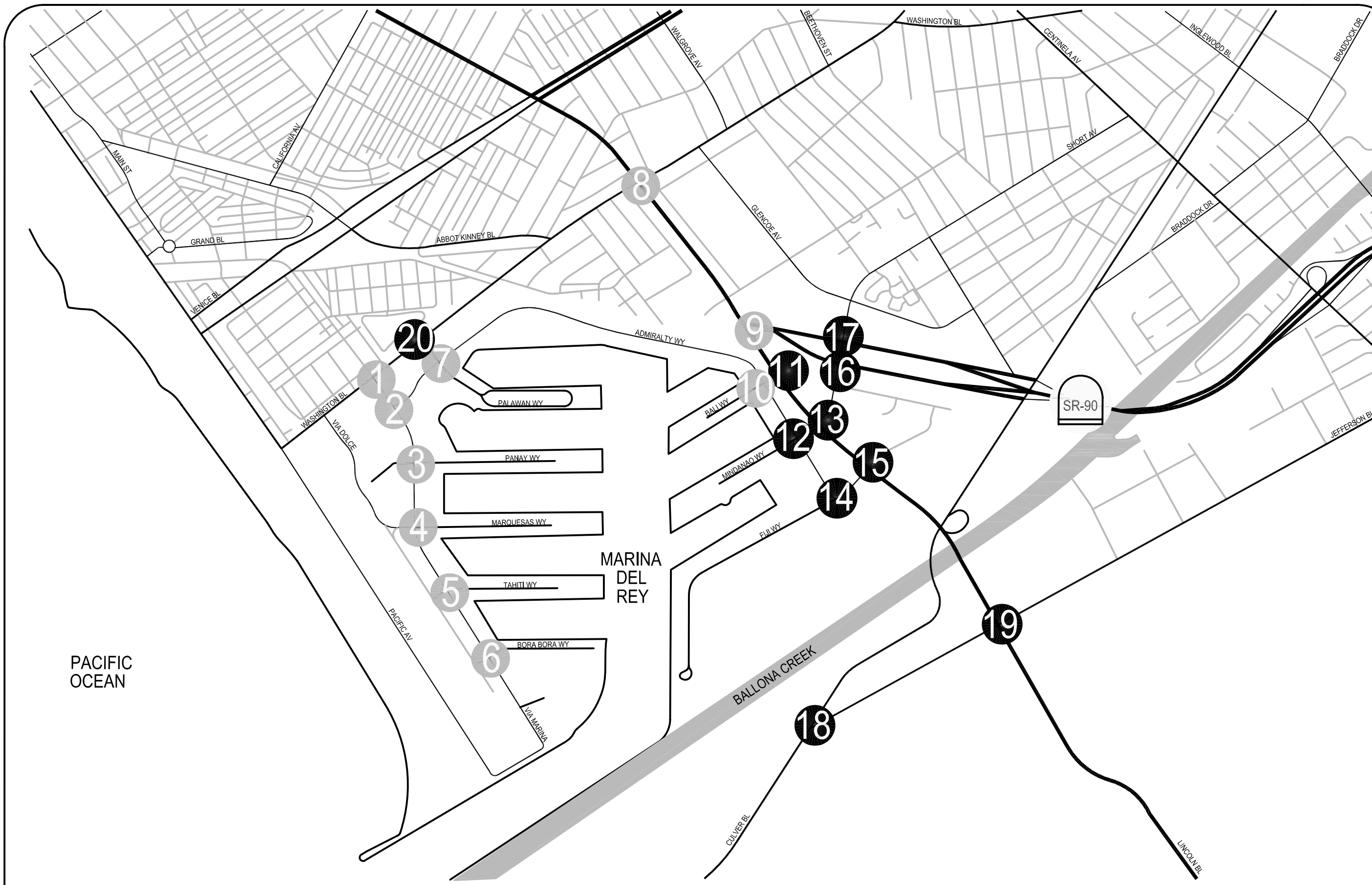
- STUDY INTERSECTION

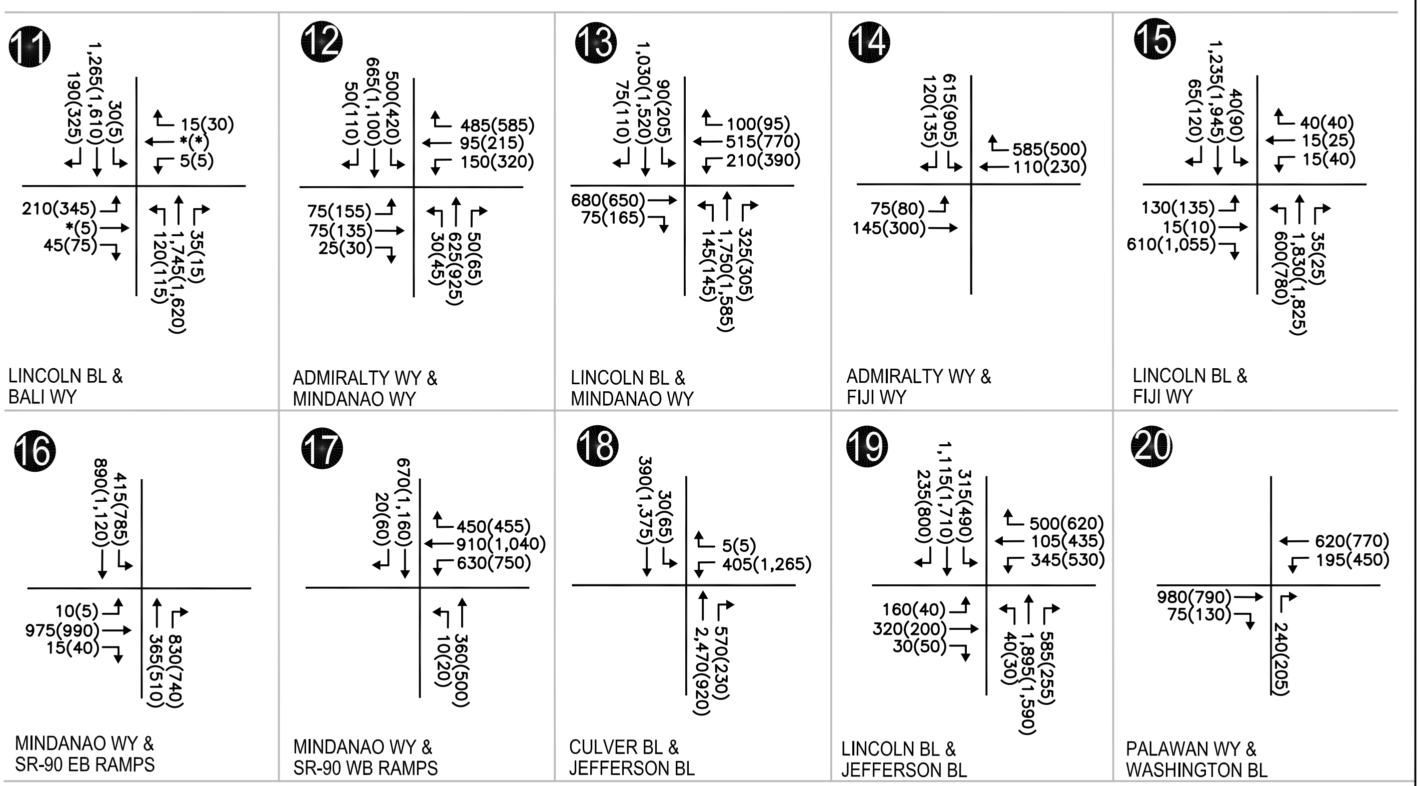
* - NEGLIGIBLE VOLUME

N
Not to scale

APPENDIX F-1
AMBIENT (2020) CONDITIONS WITH PIPELINE PROJECTS
TRAFFIC VOLUMES

RAJU Associates, Inc.





LEGEND:

XXX(XXX) - AM(PM) PEAK HOUR TRAFFIC VOLUMES ROUNDED TO THE NEAREST 5 VEHICLES

\# - STUDY INTERSECTION

* - NEGLIGIBLE VOLUME

N
Not to scale

APPENDIX F-2
AMBIENT (2020) CONDITIONS WITH PIPELINE PROJECTS
TRAFFIC VOLUMES

RAJU Associates, Inc.

AM PEAK HOUR
LEVEL OF SERVICE WORKSHEETS

APIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:38:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA / OCEAN AVE W/E: WASHINGTON BLVD I/S No: 1

AM/PM: AM Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	407	428	393	49	146	21	127	378	43	49	575	227
AMBIENT												
RELATED												
PROJECT												
TOTAL	407	428	393	49	146	21	127	378	43	49	575	227

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	2 0 1 0 0 1 0	1 0 0 0 1 0 0	1 0 1 0 1 0 0	1 0 2 0 0 1 0

SIGNAL	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
	Split	Auto	Split	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 167 B: 49

EastBound A: 288 B: 49

WestBound A: 211 B: 127

NorthBound A: 428 B: 224

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
  ATSAC Benefit

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C 428 167 127 288 / 1425 0.639 LOS B

Developed by Chun Wong, 12/94

APIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:38:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: ADMIRALTY WY I/S No: 2

AM/PM: AM Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	576	899	384	223	0	402	0	760	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	576	899	384	223	0	402	0	760	0	0	0

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	0 0 2 0 0 1 0	1 0 3 0 0 0 0	2 0 0 0 0 2 0	0 0 0 0 0 0 0

SIGNAL	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
	Perm	Free	Prot-Fix	none	Split	OLA	none	none

Critical Movements Diagram

SouthBound A: 74 B: 384

EastBound A: 0 B: 0

WestBound A: 34 B: 221

NorthBound A: 288 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
  ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C 288 384 221 0 / 1425 0.557 LOS A

Developed by Chun Wong, 12/94

APIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:38:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: PANAY WY I/S No: 3

AM/PM: AM Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	1103	23	124	424	25	20	0	181	127	1	2
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	1103	23	124	424	25	20	0	181	127	1	2

	NB							SB							WB							EB						
LANE	1	0	2	0	1	0	0	1	0	2	0	1	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 150 B: 124

EastBound A: 130 B: 127

WestBound A: 181 B: 20

NorthBound A: 375 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (375 □ 124 □ 181 □ 127) / □1500 □ 0.468 LOS □ A

Developed by Chun Wong, 12/94

APIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:38:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: MARQUESAS WY I/S No: 4

AM/PM: AM Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	43	731	7	99	292	59	3	24	253	121	12	13
AMBIENT												
RELATED												
PROJECT												
TOTAL	43	731	7	99	292	59	3	24	253	121	12	13

	NB							SB							WB							EB						
LANE	1	0	2	0	1	0	0	1	0	2	0	0	1	0	0	1	0	0	1	0	0	1	0	1	0	0	1	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 146 B: 99

EastBound A: 13 B: 121

WestBound A: 253 B: 3

NorthBound A: 246 B: 43

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (246 □ 99 □ 253 □ 121) / □1500 □ 0.409 LOS □ A

Developed by Chun Wong, 12/94

APIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:38:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA | W/E: TAHITI WY | I/S No: 5

AM/PM: AM | Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	6	605	5	87	203	12	20	2	162	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	6	605	5	87	203	12	20	2	162	0	0	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	1	0	0	1	0	0	1	0	1	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Split	Auto	none	none

Critical Movements Diagram

SouthBound A: 108 B: 87

EastBound A: 0 B: 0

WestBound A: 162 B: 20

NorthBound A: 308 B: 6

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C $= \frac{308 + 87 + 162 + 0}{1500}$ = 0.301 LOS A

Developed by Chun Wong, 12/94

APIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:38:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA | W/E: BORA BORA WY | I/S No: 6

AM/PM: AM | Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	5	375	10	61	163	10	6	1	165	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	5	375	10	61	163	10	6	1	165	0	0	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	1	0	0	1	0	0	1	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	none	none

Critical Movements Diagram

SouthBound A: 87 B: 61

EastBound A: 0 B: 0

WestBound A: 172 B: 6

NorthBound A: 195 B: 5

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C $= \frac{195 + 61 + 172 + 0}{1200}$ = 0.357 LOS A

Developed by Chun Wong, 12/94

APIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:38:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY | W/E: ADMIRALTY WY | I/S No: 7

AM/PM: AM | Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	47	96	117	143	47	82	56	905	75	88	1059	22
AMBIENT												
RELATED												
PROJECT												
TOTAL	47	96	117	143	47	82	56	905	75	88	1059	22

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 0 0 1 0 0	1 0 1 0 0 1 0	1 0 1 0 1 0 0	1 0 1 0 1 0 0
SIGNAL Phasing	Perm	Perm	Perm	Perm
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	82	143
EastBound	541	88
WestBound	490	56
NorthBound	213	47

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (213 + 143 + 56 + 541) / 1500 = 0.565 LOS A

Developed by Chun Wong, 12/94

APIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:38:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD | W/E: WASHINGTON BLVD | I/S No: 8

AM/PM: AM | Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	528	1625	196	224	1124	134	183	591	210	169	811	436
AMBIENT												
RELATED												
PROJECT												
TOTAL	528	1625	196	224	1124	134	183	591	210	169	811	436

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 2 0 1 0 0	2 0 2 0 1 0 0	2 0 2 0 0 1 0	2 0 2 0 0 1 0
SIGNAL Phasing	Prot-Fix	Prot-Fix	Prot-Fix	Prot-Fix
SIGNAL RTOR	Auto	Auto	OLA	OLA

Critical Movements Diagram

	A	B
SouthBound	419	123
EastBound	406	93
WestBound	296	101
NorthBound	607	290

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (607 + 123 + 101 + 406) / 1375 = 0.830 LOS D

Developed by Chun Wong, 12/94

APIPEAM

CalcaDB

April 21, 2010 ,Wednesday 01:06:12 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: SR-90 ON/OFF RAMPS I/S No: 9

AM/PM: AM Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	1862	175	824	1328	0	147	0	797	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	1862	175	824	1328	0	147	0	797	0	0	0

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 2 0 1 0 0	2 0 3 0 0 0 0	2 0 0 0 0 2 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Prot-Fix	none	Split	OLA	none	none

Critical Movements Diagram

	A	B
SouthBound	443	453
EastBound	0	0
WestBound	0	81
NorthBound	679	0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (679 + 453 + 81 + 0) / 1425 = 0.781 LOS C

Developed by Chun Wong, 12/94

APIPEAM

CalcaDB

April 21, 2010 ,Wednesday 01:06:12 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: BALI WY I/S No: 10

AM/PM: AM Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	24	930	64	168	1234	19	30	23	248	11	25	13
AMBIENT									-168			
RELATED												
PROJECT												
TOTAL	24	930	64	168	1234	19	30	23	80	11	25	13

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	1 0 1 0 1 0 0	1 0 0 0 1 1 0	0 1 0 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	OLA	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	627	168
EastBound	25	11
WestBound	52	30
NorthBound	497	24

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (497 + 168 + 52 + 11) / 1425 = 0.441 LOS A

Developed by Chun Wong, 12/94

APIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:38:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: BALI WY I/S No: 11

AM/PM: AM Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	118	1744	33	28	1263	189	3	0	14	208	2	45
AMBIENT												
RELATED												
PROJECT												
TOTAL	118	1744	33	28	1263	189	3	0	14	208	2	45

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	2	0	1	0	0	1	0	2	0	1	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	0

	NORTHBOUND Phasing	NORTHBOUND RTOR	SOUTHBOUND Phasing	SOUTHBOUND RTOR	WESTBOUND Phasing	WESTBOUND RTOR	EASTBOUND Phasing	EASTBOUND RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	Auto	Split	Auto

Critical Movements Diagram

	A:	B:
SouthBound	484	28
EastBound	105	105
WestBound	17	3
NorthBound	592	118

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ 592 □ 28 □ 17 □ 105 / □1375 □ 0.470 LOS □ A

Developed by Chun Wong, 12:94

APIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:38:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: MINDANAO WY I/S No: 12

AM/PM: AM Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	29	625	52	498	664	51	151	97	486	74	75	27
AMBIENT												
RELATED												
PROJECT												
TOTAL	29	625	52	498	664	51	151	97	486	74	75	27

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	1	0	1	0	0	1	0	1	0	1	0	0	1	1	0	0	0	1	0	1	0	0	0	1	0	0

	NORTHBOUND Phasing	NORTHBOUND RTOR	SOUTHBOUND Phasing	SOUTHBOUND RTOR	WESTBOUND Phasing	WESTBOUND RTOR	EASTBOUND Phasing	EASTBOUND RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	OLA	Split	Auto

Critical Movements Diagram

	A:	B:
SouthBound	358	498
EastBound	102	74
WestBound	124	124
NorthBound	339	29

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ 339 □ 498 □ 124 □ 102 / □1375 □ 0.703 LOS □ C

Developed by Chun Wong, 12:94

APIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:38:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: MINDANAO WY I/S No: 13

AM/PM: AM Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	143	1752	323	92	1030	77	209	515	100	0	682	76
AMBIENT												
RELATED												
PROJECT												
TOTAL	143	1752	323	92	1030	77	209	515	100	0	682	76

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	3	0	0	1	0	1	0	2	0	1	0	0	2	0	1	0	1	0	0	0	0	1	0	1	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto

Critical Movements Diagram

	A:	B:
SouthBound	369	92
EastBound	379	0
WestBound	308	115
NorthBound	584	143

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (584 □ 92 □ 115 □ 379) / □1375 □ 0.781 LOS □ C

Developed by Chun Wong, 12/94

APIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:38:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: FIJI WY I/S No: 14

AM/PM: AM Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	0	616	0	119	0	111	586	75	143	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	616	0	119	0	111	586	75	143	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	2	0	0	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	□none□	□none□	Split	Free	Perm	Free	Perm	□none□

Critical Movements Diagram

	A:	B:
SouthBound	0	339
EastBound	72	75
WestBound	111	0
NorthBound	0	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (0 □ 339 □ 111 □ 75) / □1500 □ 0.280 LOS □ A

Developed by Chun Wong, 12/94

APIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:38:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: FIJI WY I/S No: 15

AM/PM: AM Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	600	1832	35	41	1236	67	16	14	41	130	17	610
AMBIENT												
RELATED												
PROJECT												
TOTAL	600	1832	35	41	1236	67	16	14	41	130	17	610

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	2 0 2 0 1 0 0	1 0 2 0 1 0 0	0 0 0 1 0 0 0	1 0 1 0 0 1 0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Free

Critical Movements Diagram

	A	B
SouthBound	434	41
EastBound	17	130
WestBound	71	16
NorthBound	622	330

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) B(E/B)

$$V/C = \frac{330 + 434 + 71 + 130}{1425} = 0.607$$

LOS B

Developed by Chun Wong, 12 94

APIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:38:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 EB ON/OFF RAMPS I/S No: 16

AM/PM: AM Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	363	832	413	888	0	0	0	0	9	977	13
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	363	832	413	888	0	0	0	0	9	977	13

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	0 0 1 0 1 1 0	2 0 2 0 0 0 0	0 0 0 0 0 0 0	1 0 1 0 1 0 0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Perm	Auto	Prot-Fix	none	none	none	Split	Auto

Critical Movements Diagram

	A	B
SouthBound	444	227
EastBound	495	9
WestBound	0	0
NorthBound	458	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

$$V/C = \frac{458 + 227 + 0 + 495}{1425} = 0.758$$

LOS C

Developed by Chun Wong, 12 94

APIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:38:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 WB ON/OFF RAMPS I/S No: 17

AM/PM: AM Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	12	361	0	0	669	21	632	910	448	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	12	361	0	0	669	21	632	910	448	0	0	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	2	0	0	0	0	0	0	2	0	1	0	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	none	Perm	Auto	Split	Auto	none	none

Critical Movements Diagram

	A	B
SouthBound	230	0
EastBound	0	0
WestBound	514	514
NorthBound	181	12

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) A(E/B)

$$V/C = \frac{12 + 230 + 514 + 0}{1425} = 0.461$$

LOS A

Developed by Chun Wong, 12/94

APIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:38:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: CULVER BLVD W/E: JEFFERSON BLVD I/S No: 18

AM/PM: AM Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	2469	568	30	391	0	403	0	4	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	2469	568	30	391	0	403	0	4	0	0	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	0	2	0	0	1	0	0	1	1	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Free	Perm	none	Split	Auto	none	none

Critical Movements Diagram

	A	B
SouthBound	286	30
EastBound	0	0
WestBound	4	222
NorthBound	1235	0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

$$V/C = \frac{1235 + 30 + 222 + 0}{1500} = 0.921$$

LOS E

Developed by Chun Wong, 12/94

APIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:38:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: JEFFERSON BLVD I/S No: 19

AM/PM: AM Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	38	1895	584	313	1115	234	346	107	500	160	320	28
AMBIENT												
RELATED												
PROJECT												
TOTAL	38	1895	584	313	1115	234	346	107	500	160	320	28

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	4	0	0	1	0	2	0	3	0	1	0	0	2	0	2	0	0	2	0	1	0	2	0	1	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	Auto

Critical Movements Diagram

SouthBound A: 337 B: 172

EastBound A: 116 B: 160

WestBound A: 103 B: 190

NorthBound A: 474 B: 38

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C $\frac{474 \quad 172 \quad 190 \quad 116}{1375}$ 0.622 LOS B

Developed by Chun Wong, 12 94

APIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:38:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: WASHINGTON BLVD I/S No: 20

AM/PM: AM Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	242	0	0	0	197	622	0	0	980	74
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	242	0	0	0	197	622	0	0	980	74

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	2	0	0	1	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Split	Auto	none	none	Perm	none	Perm	Auto

Critical Movements Diagram

SouthBound A: 0 B: 0

EastBound A: 490 B: 0

WestBound A: 311 B: 197

NorthBound A: 242 B: 0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C $\frac{242 \quad 0 \quad 197 \quad 490}{1200}$ 0.774 LOS C

Developed by Chun Wong, 12 94

PM PEAK HOUR
LEVEL OF SERVICE WORKSHEETS

APIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:39:01 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA / OCEAN AVE W/E: WASHINGTON BLVD I/S No: 1

AM/PM: PM Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	467	306	253	112	528	31	166	572	33	31	577	433
AMBIENT												
RELATED												
PROJECT												
TOTAL	467	306	253	112	528	31	166	572	33	31	577	433

	NB							SB							WB							EB						
LANE	2	0	1	0	0	1	0	1	0	0	0	1	0	0	1	0	1	0	1	0	0	1	0	2	0	0	1	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Split	Auto	Split	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 559 B: 112

EastBound A: 305 B: 31

WestBound A: 303 B: 166

NorthBound A: 306 B: 257

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C $\frac{306 \quad 559 \quad 166 \quad 305}{1425}$ 0.868 LOS D

Developed by Chun Wong, 12.94

APIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:39:01 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: ADMIRALTY WY I/S No: 2

AM/PM: PM Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	352	672	717	411	0	982	0	689	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	352	672	717	411	0	982	0	689	0	0	0

	NB							SB							WB							EB						
LANE	0	0	2	0	0	1	0	1	0	3	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Free	Prot-Fix	none	Split	OLA	none	none

Critical Movements Diagram

SouthBound A: 137 B: 717

EastBound A: 0 B: 0

WestBound A: 0 B: 540

NorthBound A: 176 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C $\frac{176 \quad 717 \quad 540 \quad 0}{1425}$ 0.936 LOS E

Developed by Chun Wong, 12.94

APIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:39:01 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: PANAY WY I/S No: 3

AM/PM: PM Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	1	676	27	210	935	53	15	2	151	53	1	1
AMBIENT												
RELATED												
PROJECT												
TOTAL	1	676	27	210	935	53	15	2	151	53	1	1

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	2	0	1	0	0	1	0	2	0	1	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 329 B: 210

EastBound A: 55 B: 53

WestBound A: 151 B: 15

NorthBound A: 234 B: 1

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (234 + 210 + 151 + 53) / 1500 = 0.362 LOS A

Developed by Chun Wong, 12.94

APIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:39:01 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: MARQUESAS WY I/S No: 4

AM/PM: PM Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	16	472	12	179	586	95	5	7	119	120	23	38
AMBIENT												
RELATED												
PROJECT												
TOTAL	16	472	12	179	586	95	5	7	119	120	23	38

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	2	0	1	0	0	1	0	2	0	0	1	0	0	1	0	0	1	0	0	1	0	1	0	0	1	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 293 B: 179

EastBound A: 38 B: 120

WestBound A: 119 B: 5

NorthBound A: 161 B: 16

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (161 + 179 + 119 + 120) / 1500 = 0.316 LOS A

Developed by Chun Wong, 12.94

APIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:39:01 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA | W/E: TAHITI WY | I/S No: 5

AM/PM: PM | Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	TH	RT	SOUTHBOUND LT	TH	RT	WESTBOUND LT	TH	RT	EASTBOUND LT	TH	RT
EXISTING	2	367	12	131	477	25	6	0	90	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	2	367	12	131	477	25	6	0	90	0	0	0

	Northbound	Southbound	Westbound	Eastbound
LANE	0 1 0 0 1 0 0	1 0 1 0 1 0 0	0 1 0 0 1 0 0	0 0 0 0 0 0 0
SIGNAL Phasing	Perm	Perm	Split	none
SIGNAL RTOR	Auto	Auto	Auto	none

Critical Movements Diagram

SouthBound A: 251 B: 131

EastBound A: 0 B: 0

WestBound A: 90 B: 6

NorthBound A: 192 B: 2

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (192 + 131 + 90 + 0) / 1500 = 0.205 LOS A

Developed by Chun Wong, 12:94

APIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:39:01 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA | W/E: BORA BORA WY | I/S No: 6

AM/PM: PM | Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	TH	RT	SOUTHBOUND LT	TH	RT	WESTBOUND LT	TH	RT	EASTBOUND LT	TH	RT
EXISTING	3	277	5	160	329	20	1	0	92	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	3	277	5	160	329	20	1	0	92	0	0	0

	Northbound	Southbound	Westbound	Eastbound
LANE	0 1 0 0 1 0 0	1 0 1 0 1 0 0	0 0 0 1 0 0 0	0 0 0 0 0 0 0
SIGNAL Phasing	Perm	Perm	Perm	none
SIGNAL RTOR	Auto	Auto	Auto	none

Critical Movements Diagram

SouthBound A: 175 B: 160

EastBound A: 0 B: 0

WestBound A: 93 B: 1

NorthBound A: 144 B: 3

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (144 + 160 + 93 + 0) / 1200 = 0.331 LOS A

Developed by Chun Wong, 12:94

APIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:39:01 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY | W/E: ADMIRALTY WY | I/S No: 7

AM/PM: PM | Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	59	89	119	339	176	196	187	1410	125	75	1242	47
AMBIENT												
RELATED												
PROJECT												
TOTAL	59	89	119	339	176	196	187	1410	125	75	1242	47

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	0	0	1	0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	0	1	0	1	0	1	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A:	B:
SouthBound	196	339
EastBound	645	75
WestBound	768	187
NorthBound	208	59

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (208 + 339 + 768 + 75) / 1500 = 0.857   LOS = D

Developed by Chun Wong, 12/94

APIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:39:01 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD | W/E: WASHINGTON BLVD | I/S No: 8

AM/PM: PM | Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	524	1506	290	253	1433	191	283	870	312	138	746	543
AMBIENT												
RELATED												
PROJECT												
TOTAL	524	1506	290	253	1433	191	283	870	312	138	746	543

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	2	0	2	0	1	0	0	2	0	2	0	1	0	0	2	0	2	0	0	1	0	2	0	2	0	0	1	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	OLA

Critical Movements Diagram

	A:	B:
SouthBound	541	139
EastBound	373	76
WestBound	435	156
NorthBound	599	288

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (288 + 541 + 156 + 373) / 1375 = 0.918   LOS = E

Developed by Chun Wong, 12/94

APIPEPM

CalcaDB

April 21, 2010 ,Wednesday 01:06:42 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: SR-90 ON/OFF RAMPS I/S No: 9

AM/PM: PM Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	TH	RT	SOUTHBOUND LT	TH	RT	WESTBOUND LT	TH	RT	EASTBOUND LT	TH	RT
EXISTING	0	1696	211	829	1769	0	164	0	930	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	1696	211	829	1769	0	164	0	930	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 2 0 1 0 0	2 0 3 0 0 0 0	2 0 0 0 0 2 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Prot-Fix	none	Split	OLA	none	none

Critical Movements Diagram

	A	B
SouthBound	590	456
EastBound	0	0
WestBound	56	90
NorthBound	636	0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (636 + 456 + 90 + 0) / 1425 = 0.759 LOS C

Developed by Chun Wong, 12/94

APIPEPM

CalcaDB

April 21, 2010 ,Wednesday 01:06:42 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: BALI WY I/S No: 10

AM/PM: PM Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	TH	RT	SOUTHBOUND LT	TH	RT	WESTBOUND LT	TH	RT	EASTBOUND LT	TH	RT
EXISTING	19	1263	200	185	1379	17	70	16	364	19	35	27
AMBIENT									-185			
RELATED												
PROJECT												
TOTAL	19	1263	200	185	1379	17	70	16	179	19	35	27

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	1 0 1 0 1 0 0	1 0 0 0 1 1 0	0 1 0 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	OLA	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	698	185
EastBound	41	19
WestBound	98	70
NorthBound	732	19

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (732 + 185 + 98 + 19) / 1425 = 0.656 LOS B

Developed by Chun Wong, 12/94

APIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:39:01 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: BALI WY I/S No: 11

AM/PM: PM Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	115	1618	16	6	1610	324	5	0	31	347	3	74
AMBIENT												
RELATED												
PROJECT												
TOTAL	115	1618	16	6	1610	324	5	0	31	347	3	74

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	2	0	1	0	0	1	0	2	0	1	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	Auto	Split	Auto

Critical Movements Diagram

SouthBound A: 645 B: 6

EastBound A: 175 B: 175

WestBound A: 36 B: 5

NorthBound A: 545 B: 115

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (115 □ 645 □ 36 □ 175) / □1375 □ 0.636 LOS □ B

Developed by Chun Wong, 12.94

APIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:39:01 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: MINDANAO WY I/S No: 12

AM/PM: PM Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	43	923	64	420	1102	109	321	213	587	154	134	30
AMBIENT												
RELATED												
PROJECT												
TOTAL	43	923	64	420	1102	109	321	213	587	154	134	30

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	1	0	1	0	0	1	0	1	0	1	0	0	1	1	0	0	0	1	0	1	0	0	0	1	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	OLA	Split	Auto

Critical Movements Diagram

SouthBound A: 606 B: 420

EastBound A: 164 B: 154

WestBound A: 267 B: 267

NorthBound A: 494 B: 43

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (494 □ 420 □ 267 □ 164) / □1375 □ 0.908 LOS □ E

Developed by Chun Wong, 12.94

APIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:39:01 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD | W/E: MINDANAO WY | I/S No: 13

AM/PM: PM | Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	144	1583	303	203	1521	110	392	769	94	0	649	163
AMBIENT												
RELATED												
PROJECT												
TOTAL	144	1583	303	203	1521	110	392	769	94	0	649	163

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	3	0	0	1	0	1	0	2	0	1	0	0	2	0	1	0	1	0	0	0	0	1	0	1	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto

Critical Movements Diagram

	SouthBound	EastBound	WestBound	NorthBound
A:	544	406	432	528
B:	203	0	216	144

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (528 + 203 + 216 + 406) / 1375 = 0.914 LOS = E

Developed by Chun Wong, 12/94

APIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:39:01 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY | W/E: FIJI WY | I/S No: 14

AM/PM: PM | Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	0	905	0	137	0	229	501	81	298	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	905	0	137	0	229	501	81	298	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	2	0	0	0	

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	none	none	Split	Free	Perm	Free	Perm	none

Critical Movements Diagram

	SouthBound	EastBound	WestBound	NorthBound
A:	0	149	229	0
B:	498	81	0	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (0 + 498 + 229 + 81) / 1500 = 0.469 LOS = A

Developed by Chun Wong, 12/94

APIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:39:01 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: FIJI WY I/S No: 15

AM/PM: PM Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	TH	RT	SOUTHBOUND LT	TH	RT	WESTBOUND LT	TH	RT	EASTBOUND LT	TH	RT
EXISTING	780	1826	24	92	1945	119	42	23	40	137	8	1054
AMBIENT												
RELATED												
PROJECT												
TOTAL	780	1826	24	92	1945	119	42	23	40	137	8	1054

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	2	0	2	0	1	0	0	1	0	2	0	1	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Free

Critical Movements Diagram

	A:	B:
SouthBound	688	92
EastBound	8	137
WestBound	105	42
NorthBound	617	429

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) B(E/B)

$$V/C = \frac{429 + 688 + 105 + 137}{1425} = 0.884$$

LOS D

Developed by Chun Wong, 12/94

APIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:39:01 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 EB ON/OFF RAMPS I/S No: 16

AM/PM: PM Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	TH	RT	SOUTHBOUND LT	TH	RT	WESTBOUND LT	TH	RT	EASTBOUND LT	TH	RT
EXISTING	0	511	738	783	1122	0	0	0	0	7	989	41
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	511	738	783	1122	0	0	0	0	7	989	41

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	0	1	0	1	1	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Prot-Fix	none	none	none	Split	Auto

Critical Movements Diagram

	A:	B:
SouthBound	561	431
EastBound	515	7
WestBound	0	0
NorthBound	416	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

$$V/C = \frac{416 + 431 + 0 + 515}{1425} = 0.886$$

LOS D

Developed by Chun Wong, 12/94

APIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:39:01 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 WB ON/OFF RAMPS I/S No: 17

AM/PM: PM Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	18	500	0	0	1162	60	749	1039	453	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	18	500	0	0	1162	60	749	1039	453	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 0 0 0	0 0 2 0 1 0 0	1 1 1 0 0 1 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	none	Perm	Auto	Split	Auto	none	none

Critical Movements Diagram

SouthBound A: 407 B: 0

EastBound A: 0 B: 0

WestBound A: 596 B: 596

NorthBound A: 250 B: 18

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C 18 407 596 0 / 1425 0.646 LOS B

Developed by Chun Wong, 12/94

APIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:39:01 PM

INTERSECTION DATA SUMMARY SHEET

N/S: CULVER BLVD W/E: JEFFERSON BLVD I/S No: 18

AM/PM: PM Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	918	232	65	1373	0	1264	0	3	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	918	232	65	1373	0	1264	0	3	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 2 0 0 1 0	0 1 1 0 0 0 0	2 0 0 0 0 1 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Free	Perm	none	Split	Auto	none	none

Critical Movements Diagram

SouthBound A: 882 B: 65

EastBound A: 0 B: 0

WestBound A: 3 B: 695

NorthBound A: 459 B: 0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C 0 882 695 0 / 1500 0.981 LOS E

Developed by Chun Wong, 12/94

APIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:39:01 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: JEFFERSON BLVD I/S No: 19

AM/PM: PM Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	28	1591	257	489	1708	801	528	437	618	38	200	52
AMBIENT												
RELATED												
PROJECT												
TOTAL	28	1591	257	489	1708	801	528	437	618	38	200	52

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 4 0 0 1 0	2 0 3 0 1 0 0	2 0 2 0 0 2 0	1 0 2 0 1 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	Auto

Critical Movements Diagram

	A:	B:
SouthBound	801	269
EastBound	84	38
WestBound	219	290
NorthBound	398	28

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (28 + 801 + 290 + 84) / 1375 = 0.805 LOS D

Developed by Chun Wong, 12.94

APIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:39:01 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: WASHINGTON BLVD I/S No: 20

AM/PM: PM Comments: AMBIENT (2020) WITH LCP-PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	205	0	0	0	451	768	0	0	788	130
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	205	0	0	0	451	768	0	0	788	130

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 0 0 1 0	0 0 0 0 0 0 0	1 0 2 0 0 0 0	0 0 2 0 0 1 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Split	Auto	none	none	Perm	none	Perm	Auto

Critical Movements Diagram

	A:	B:
SouthBound	0	0
EastBound	394	0
WestBound	384	451
NorthBound	205	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

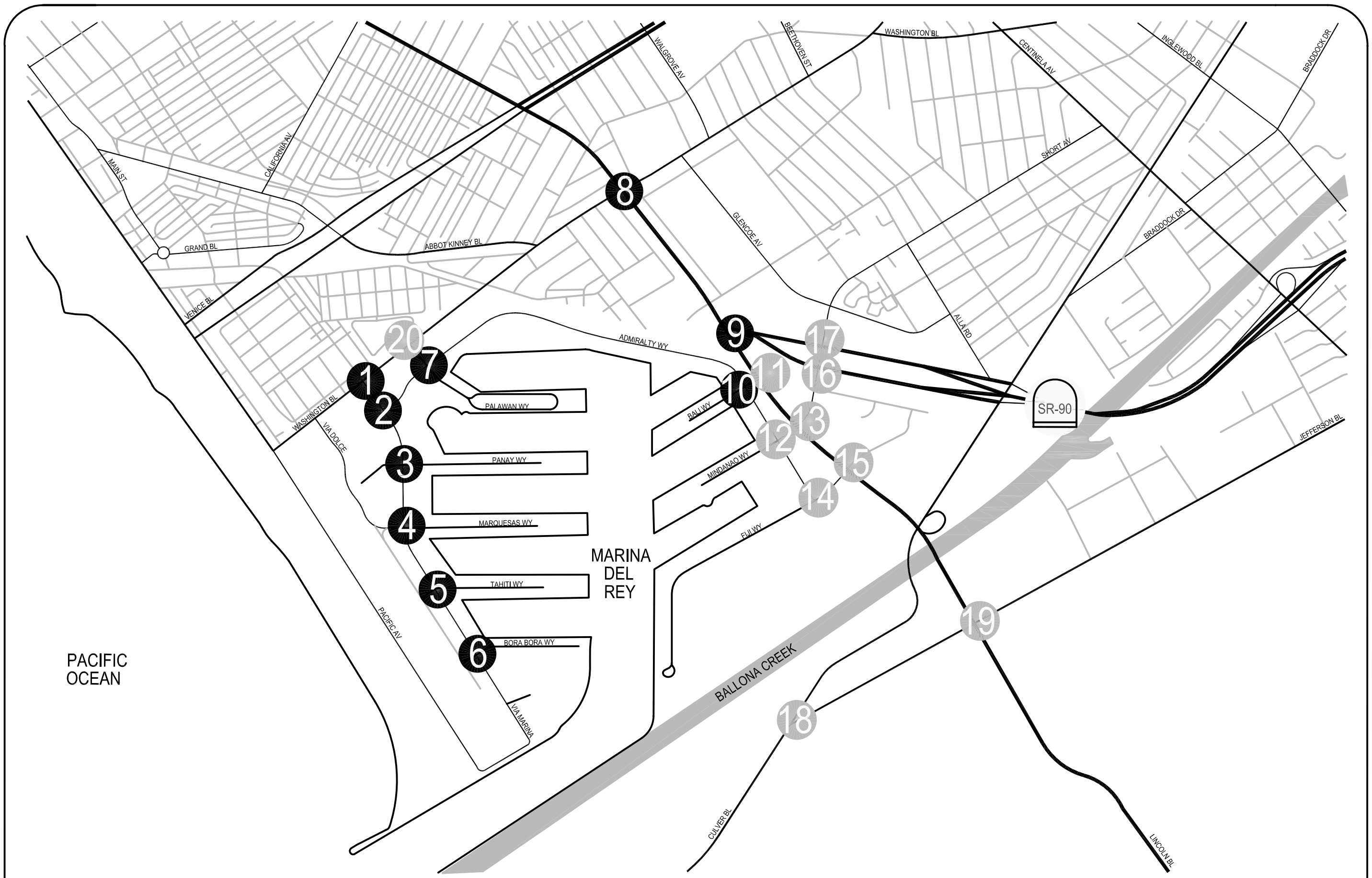
V/C = (205 + 0 + 451 + 394) / 1200 = 0.875 LOS D

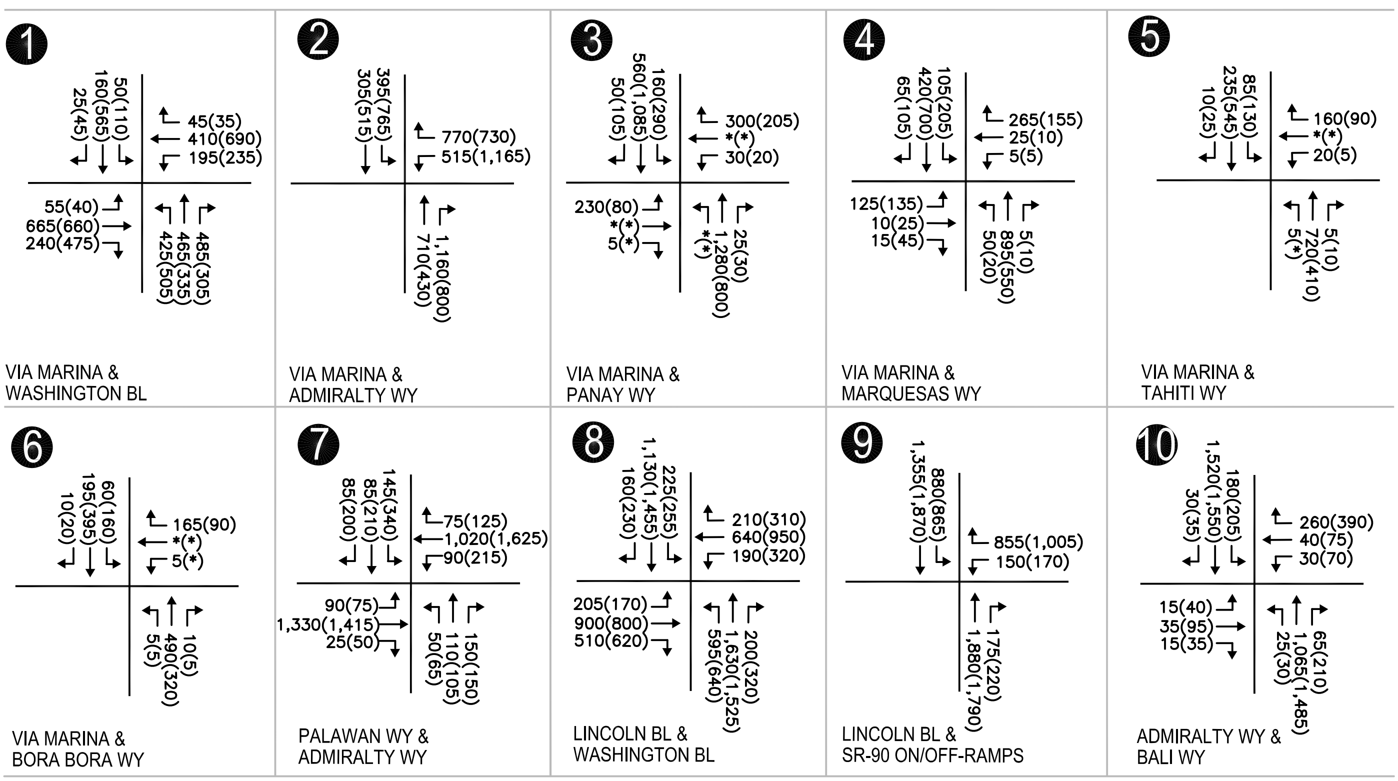
Developed by Chun Wong, 12.94

APPENDIX G

Ambient (2020) Conditions with Proposed LCP Buildout (including Pipeline Projects) Traffic Volumes and Level of Service Worksheets

All signalized intersections include V/C credit of 0.10 to account from ATSAC and ATCS. ATCS credit of 0.03 is not automatically reflected on the capacity calculation worksheets.





LEGEND:

XXX(XXX) - AM(PM) PEAK HOUR TRAFFIC VOLUMES ROUNDED TO THE NEAREST 5 VEHICLES

\# - STUDY INTERSECTION

* - NEGLIGIBLE VOLUME

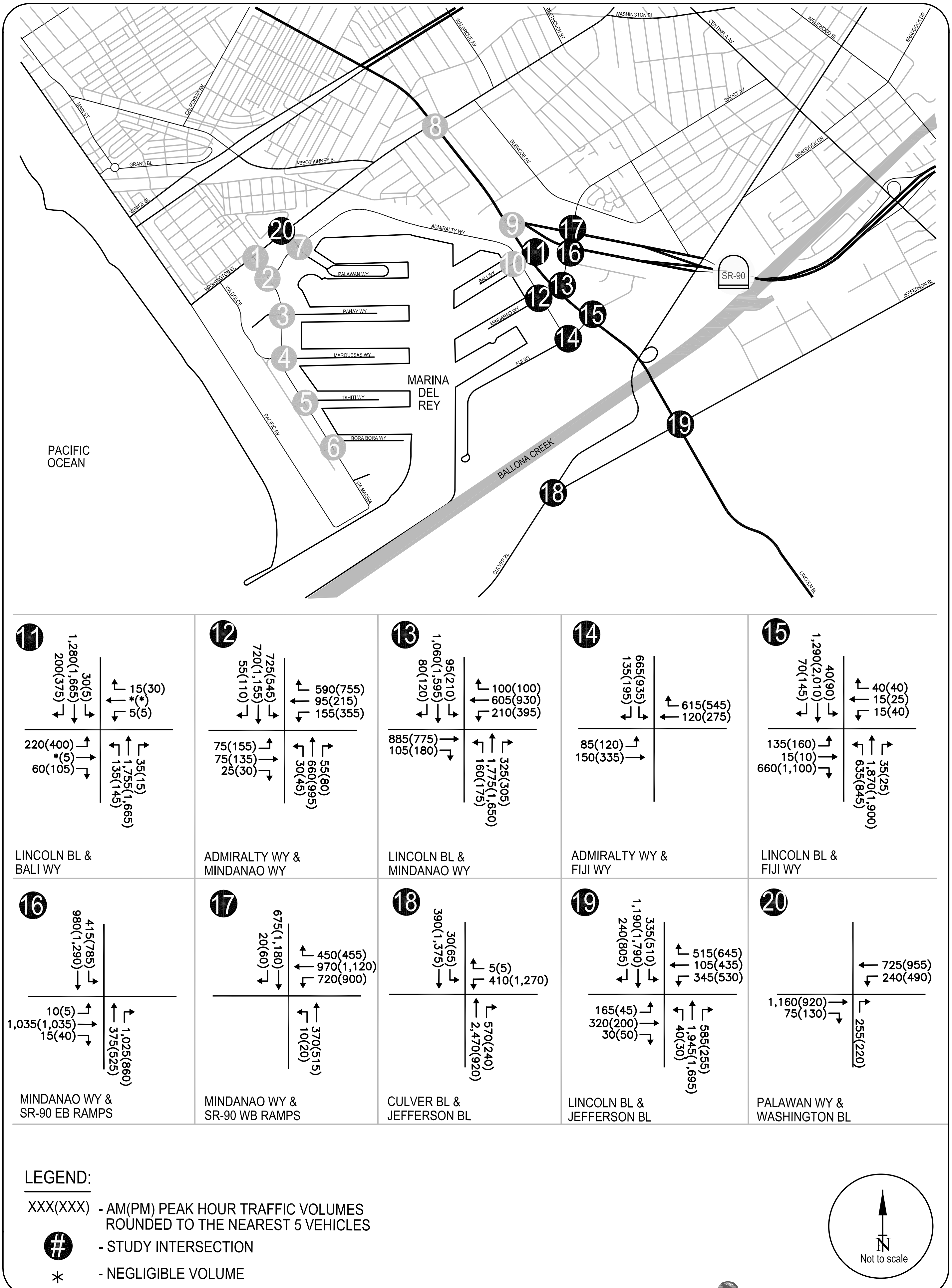
N

Not to scale

APPENDIX G-1

AMBIENT (2020) CONDITIONS WITH PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS) TRAFFIC VOLUMES

RAJU Associates, Inc.



APPENDIX G-2
AMBIENT (2020) CONDITIONS WITH PROPOSED LCP BUILDOUT
(INCLUDING PIPELINE PROJECTS) TRAFFIC VOLUMES

RAJU Associates, Inc.

AM PEAK HOUR

LEVEL OF SERVICE WORKSHEETS

APROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:41:10 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA / OCEAN AVE W/E: WASHINGTON BLVD I/S No: 1

AM/PM: AM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	423	463	486	49	161	25	194	411	43	57	665	240
AMBIENT												
RELATED												
PROJECT												
TOTAL	423	463	486	49	161	25	194	411	43	57	665	240

LANE	NB	SB	WB	EB
	2 0 1 0 0 1 0	1 0 0 0 1 0 0	1 0 1 0 1 0 0	1 0 2 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	Auto	Split	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A:	B:
SouthBound	186	49
EastBound	333	57
WestBound	227	194
NorthBound	486	233

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C 486 186 194 333 / 1425 0.771 LOS C

Developed by Chun Wong, 12/94

APROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:41:10 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: ADMIRALTY WY I/S No: 2

AM/PM: AM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	711	1162	395	307	0	514	0	770	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	711	1162	395	307	0	514	0	770	0	0	0

LANE	NB	SB	WB	EB
	0 0 2 0 0 1 0	1 0 3 0 0 0 0	2 0 0 0 0 2 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Free	Prot-Fix	none	Split	OLA	none	none

Critical Movements Diagram

	A:	B:
SouthBound	102	395
EastBound	0	0
WestBound	29	283
NorthBound	356	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C 356 395 283 0 / 1425 0.656 LOS B

Developed by Chun Wong, 12/94

APROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:41:10 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: PANAY WY I/S No: 3

AM/PM: AM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	1	1282	25	159	559	51	28	0	298	230	1	4
AMBIENT												
RELATED												
PROJECT												
TOTAL	1	1282	25	159	559	51	28	0	298	230	1	4

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	2	0	1	0	0	1	0	2	0	1	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	203	159
EastBound	235	230
WestBound	298	28
NorthBound	436	1

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (436 □ 159 □ 298 □ 230) / □1500 □ 0.679 LOS □ B

Developed by Chun Wong, 12 94

APROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:41:10 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: MARQUESAS WY I/S No: 4

AM/PM: AM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	49	894	7	107	422	67	3	24	267	125	12	15
AMBIENT												
RELATED												
PROJECT												
TOTAL	49	894	7	107	422	67	3	24	267	125	12	15

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	2	0	1	0	0	1	0	2	0	0	1	0	0	1	0	0	1	0	0	1	0	1	0	0	1	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	211	107
EastBound	15	125
WestBound	267	3
NorthBound	300	49

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (300 □ 107 □ 267 □ 125) / □1500 □ 0.463 LOS □ A

Developed by Chun Wong, 12 94

APROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:41:10 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: TAHITI WY I/S No: 5

AM/PM: AM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	6	721	5	87	236	12	20	2	162	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	6	721	5	87	236	12	20	2	162	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 1 0 0	1 0 1 0 1 0 0	0 1 0 0 1 0 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Split	Auto	none	none

Critical Movements Diagram

SouthBound A: 124 B: 87

EastBound A: 0 B: 0

WestBound A: 162 B: 20

NorthBound A: 366 B: 6

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (366 + 87 + 162 + 0) / 1500 = 0.340 LOS A

Developed by Chun Wong, 12.94

APROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:41:10 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: BORA BORA WY I/S No: 6

AM/PM: AM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	5	491	10	61	196	10	6	1	165	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	5	491	10	61	196	10	6	1	165	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 1 0 0	1 0 1 0 1 0 0	0 0 0 1 0 0 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	none	none

Critical Movements Diagram

SouthBound A: 103 B: 61

EastBound A: 0 B: 0

WestBound A: 172 B: 6

NorthBound A: 253 B: 5

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (253 + 61 + 172 + 0) / 1200 = 0.405 LOS A

Developed by Chun Wong, 12.94

APROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:41:10 PM

INTERSECTION DATA SUMMARY SHEET

N/S:	PALAWAN WY	W/E:	ADMIRALTY WY	I/S No:	7
AM/PM:	AM	Comments:	AMBIENT (2020) W/PROPOSED LCP BUILDOUT		
COUNT DATE:		STUDY DATE:		GROWTH FACTOR:	

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	50	109	152	143	87	85	91	1020	75	88	1331	23
AMBIENT												
RELATED												
PROJECT												
TOTAL	50	109	152	143	87	85	91	1020	75	88	1331	23

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	0	0	1	0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	0	1	0	1	0	1	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 87 B: 143

EastBound A: 677 B: 88

WestBound A: 548 B: 91

NorthBound A: 261 B: 50

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (261 □ 143 □ 91 □ 677) / □1500 □ 0.711 LOS □ C

Developed by Chun Wong, 12.94

APROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:41:10 PM

INTERSECTION DATA SUMMARY SHEET

N/S:	LINCOLN BLVD	W/E:	WASHINGTON BLVD	I/S No:	8
AM/PM:	AM	Comments:	AMBIENT (2020) W/PROPOSED LCP BUILDOUT		
COUNT DATE:		STUDY DATE:		GROWTH FACTOR:	

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	597	1629	201	224	1129	161	190	640	210	206	900	509
AMBIENT												
RELATED												
PROJECT												
TOTAL	597	1629	201	224	1129	161	190	640	210	206	900	509

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	2	0	2	0	1	0	0	2	0	2	0	1	0	0	2	0	2	0	0	1	0	2	0	2	0	0	1	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	OLA

Critical Movements Diagram

SouthBound A: 430 B: 123

EastBound A: 450 B: 113

WestBound A: 320 B: 105

NorthBound A: 610 B: 328

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (328 □ 430 □ 105 □ 450) / □1375 □ 0.885 LOS □ D

Developed by Chun Wong, 12.94

APROJAM

CalcaDB

April 21, 2010 ,Wednesday 01:08:17 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: SR-90 ON/OFF RAMPS I/S No: 9

AM/PM: AM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	1882	176	880	1356	0	149	0	856	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	1882	176	880	1356	0	149	0	856	0	0	0

	NB							SB							WB							EB						
LANE	0	0	2	0	1	0	0	2	0	3	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Prot-Fix	□none□	Split	OLA	□none□	□none□

Critical Movements Diagram

SouthBound A: 452 B: 484

EastBound A: 0 B: 0

WestBound A: 0 B: 82

NorthBound A: 686 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (686 □ 484 □ 82 □ 0) / □1425 □ 0.809 LOS □ D

Developed by Chun Wong, 12/94

APROJAM

CalcaDB

April 21, 2010 ,Wednesday 01:08:17 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: BALI WY I/S No: 10

AM/PM: AM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	27	1067	65	182	1519	28	30	39	260	15	36	15
AMBIENT									-182			
RELATED												
PROJECT												
TOTAL	27	1067	65	182	1519	28	30	39	78	15	36	15

	NB							SB							WB							EB						
LANE	1	0	1	0	1	0	0	1	0	1	0	1	0	0	1	0	0	0	1	1	0	0	1	0	0	1	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	OLA	Perm	Auto

Critical Movements Diagram

SouthBound A: 774 B: 182

EastBound A: 33 B: 15

WestBound A: 59 B: 30

NorthBound A: 566 B: 27

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (27 □ 774 □ 59 □ 15) / □1425 □ 0.544 LOS □ A

Developed by Chun Wong, 12/94

APROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:41:10 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: BALI WY I/S No: 11

AM/PM: AM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	134	1754	33	28	1280	201	3	0	14	219	2	59
AMBIENT												
RELATED												
PROJECT												
TOTAL	134	1754	33	28	1280	201	3	0	14	219	2	59

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	0 0 0 1 0 0 0	1 1 0 0 0 1 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	Auto	Split	Auto

Critical Movements Diagram

	A	B
SouthBound	494	28
EastBound	111	111
WestBound	17	3
NorthBound	596	134

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (134 □ 494 □ 17 □ 111) / □1375 □ 0.480 LOS □ A

Developed by Chun Wong, 12/94

APROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:41:10 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: MINDANAO WY I/S No: 12

AM/PM: AM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	29	660	55	724	720	55	157	97	591	75	75	27
AMBIENT												
RELATED												
PROJECT												
TOTAL	29	660	55	724	720	55	157	97	591	75	75	27

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	1 0 1 0 1 0 0	1 1 0 0 0 1 0	1 0 0 0 1 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	OLA	Split	Auto

Critical Movements Diagram

	A	B
SouthBound	388	724
EastBound	102	75
WestBound	127	127
NorthBound	358	29

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (358 □ 724 □ 127 □ 102) / □1375 □ 0.883 LOS □ D

Developed by Chun Wong, 12/94

APROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:41:10 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: MINDANAO WY I/S No: 13

AM/PM: AM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	159	1775	323	93	1059	78	209	607	102	0	883	104
AMBIENT												
RELATED												
PROJECT												
TOTAL	159	1775	323	93	1059	78	209	607	102	0	883	104

	NB							SB							WB							EB						
LANE	1	0	3	0	0	1	0	1	0	2	0	1	0	0	2	0	1	0	1	0	0	0	0	1	0	1	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	379	93
EastBound	494	0
WestBound	355	115
NorthBound	592	159

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)
West/East Critical Movements B(W/B) A(E/B)

V/C = (592 + 93 + 115 + 494) / 1375 = 0.871 LOS D

Developed by Chun Wong, 12/94

APROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:41:10 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: FIJI WY I/S No: 14

AM/PM: AM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	0	664	0	134	0	119	616	83	149	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	664	0	134	0	119	616	83	149	0

	NB							SB							WB							EB						
LANE	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	2	0	0	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	none	none	Split	Free	Perm	Free	Perm	none

Critical Movements Diagram

	A	B
SouthBound	0	365
EastBound	75	83
WestBound	119	0
NorthBound	0	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)
West/East Critical Movements A(W/B) B(E/B)

V/C = (0 + 365 + 119 + 83) / 1500 = 0.308 LOS A

Developed by Chun Wong, 12/94

APROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:41:10 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: FIJI WY I/S No: 15

AM/PM: AM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	TH	RT	SOUTHBOUND LT	TH	RT	WESTBOUND LT	TH	RT	EASTBOUND LT	TH	RT
EXISTING	634	1868	35	41	1289	71	16	14	41	135	17	660
AMBIENT												
RELATED												
PROJECT												
TOTAL	634	1868	35	41	1289	71	16	14	41	135	17	660

	Northbound	Southbound	Westbound	Eastbound
LANE	2 0 2 0 1 0 0	1 0 2 0 1 0 0	0 0 0 1 0 0 0	1 0 1 0 0 1 0
SIGNAL Phasing	Prot-Fix	Prot-Fix	Perm	Perm
SIGNAL RTOR	Auto	Auto	Auto	Free

Critical Movements Diagram

	A	B
SouthBound	453	41
EastBound	17	135
WestBound	71	16
NorthBound	634	349

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (349 + 453 + 71 + 135) / 1425 = 0.637 LOS B

Developed by Chun Wong, 12/94

APROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:41:10 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 EB ON/OFF RAMPS I/S No: 16

AM/PM: AM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	TH	RT	SOUTHBOUND LT	TH	RT	WESTBOUND LT	TH	RT	EASTBOUND LT	TH	RT
EXISTING	0	374	1023	413	982	0	0	0	0	9	1034	13
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	374	1023	413	982	0	0	0	0	9	1034	13

	Northbound	Southbound	Westbound	Eastbound
LANE	0 0 1 0 1 1 0	2 0 2 0 0 0 0	0 0 0 0 0 0 0	1 0 1 0 1 0 0
SIGNAL Phasing	Perm	Prot-Fix	none	Split
SIGNAL RTOR	Auto	none	none	Auto

Critical Movements Diagram

	A	B
SouthBound	491	227
EastBound	524	9
WestBound	0	0
NorthBound	563	0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (563 + 227 + 0 + 524) / 1425 = 0.852 LOS D

Developed by Chun Wong, 12/94

APROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:41:10 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 WB ON/OFF RAMPS I/S No: 17

AM/PM: AM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	12	372	0	0	674	21	721	971	448	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	12	372	0	0	674	21	721	971	448	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 0 0 0	0 0 2 0 1 0 0	1 1 1 0 0 1 0	0 0 0 0 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	none	Perm	Auto	Split	Auto	none	none

Critical Movements Diagram

	A	B
SouthBound	232	0
EastBound	0	0
WestBound	564	564
NorthBound	186	12

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (12 + 232 + 564 - 0) / 1425 = 0.497 LOS A

Developed by Chun Wong, 12:94

APROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:41:10 PM

INTERSECTION DATA SUMMARY SHEET

N/S: CULVER BLVD W/E: JEFFERSON BLVD I/S No: 18

AM/PM: AM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	2469	572	30	391	0	409	0	4	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	2469	572	30	391	0	409	0	4	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 2 0 0 1 0	0 1 1 0 0 0 0	2 0 0 0 0 1 0	0 0 0 0 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Free	Perm	none	Split	Auto	none	none

Critical Movements Diagram

	A	B
SouthBound	286	30
EastBound	0	0
WestBound	4	225
NorthBound	1235	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (1235 + 30 + 225 - 0) / 1500 = 0.923 LOS E

Developed by Chun Wong, 12:94

APROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:41:10 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: JEFFERSON BLVD I/S No: 19

AM/PM: AM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	38	1947	584	333	1191	240	346	107	514	164	320	28
AMBIENT												
RELATED												
PROJECT												
TOTAL	38	1947	584	333	1191	240	346	107	514	164	320	28

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	4	0	0	1	0	2	0	3	0	1	0	0	2	0	2	0	0	2	0	1	0	2	0	1	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	Auto

Critical Movements Diagram

SouthBound A: 358 B: 183

EastBound A: 116 B: 164

WestBound A: 100 B: 190

NorthBound A: 487 B: 38

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (487 □ 183 □ 190 □ 116) / □1375 □ 0.640 LOS □ B

Developed by Chun Wong, 12.94

APROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:41:10 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: WASHINGTON BLVD I/S No: 20

AM/PM: AM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	255	0	0	0	239	723	0	0	1162	75
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	255	0	0	0	239	723	0	0	1162	75

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	2	0	0	1	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	Auto	□none□	□none□	Perm	□none□	Perm	Auto

Critical Movements Diagram

SouthBound A: 0 B: 0

EastBound A: 581 B: 0

WestBound A: 362 B: 239

NorthBound A: 255 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ A(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (255 □ 0 □ 239 □ 581) / 1200 □ 0.896 LOS □ D

Developed by Chun Wong, 12.94

PM PEAK HOUR
LEVEL OF SERVICE WORKSHEETS

APROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:42:03 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA / OCEAN AVE W/E: WASHINGTON BLVD I/S No: 1

AM/PM: PM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	506	334	307	112	566	47	237	688	33	42	660	475
AMBIENT												
RELATED												
PROJECT												
TOTAL	506	334	307	112	566	47	237	688	33	42	660	475

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 1 0 0 1 0	1 0 0 0 1 0 0	1 0 1 0 1 0 0	1 0 2 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	Auto	Split	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 613 B: 112

EastBound A: 336 B: 42

WestBound A: 361 B: 237

NorthBound A: 334 B: 278

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C $= \frac{334 + 613 + 237 + 336}{1425} =$ 0.997 LOS E

Developed by Chun Wong, 12.94

APROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:42:03 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: ADMIRALTY WY I/S No: 2

AM/PM: PM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	429	800	766	514	0	1164	0	732	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	429	800	766	514	0	1164	0	732	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 2 0 0 1 0	1 0 3 0 0 0 0	2 0 0 0 0 2 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Free	Prot-Fix	none	Split	OLA	none	none

Critical Movements Diagram

SouthBound A: 171 B: 766

EastBound A: 0 B: 0

WestBound A: 0 B: 640

NorthBound A: 215 B: 0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C $= \frac{215 + 766 + 640 + 0}{1425} =$ 1.068 LOS F

Developed by Chun Wong, 12.94

APROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:42:03 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: PANAY WY I/S No: 3

AM/PM: PM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	2	798	32	292	1084	107	18	2	205	82	1	2
AMBIENT												
RELATED												
PROJECT												
TOTAL	2	798	32	292	1084	107	18	2	205	82	1	2

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	0 1 0 0 0 1 0	0 0 0 1 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A:	B:
SouthBound	397	292
EastBound	85	82
WestBound	205	18
NorthBound	277	2

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ 277 □ 292 □ 205 □ 82 / □1500 □ 0.501 LOS □ A

Developed by Chun Wong, 12/94

APROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:42:03 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: MARQUESAS WY I/S No: 4

AM/PM: PM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	20	550	12	206	702	106	6	8	154	134	24	43
AMBIENT												
RELATED												
PROJECT												
TOTAL	20	550	12	206	702	106	6	8	154	134	24	43

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 0 1 0	0 1 0 0 1 0 0	1 0 1 0 0 1 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A:	B:
SouthBound	351	206
EastBound	43	134
WestBound	154	6
NorthBound	187	20

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ 187 □ 206 □ 154 □ 134 / □1500 □ 0.384 LOS □ A

Developed by Chun Wong, 12/94

APROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:42:03 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: TAHITI WY I/S No: 5

AM/PM: PM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	2	409	12	131	545	25	6	0	90	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	2	409	12	131	545	25	6	0	90	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 1 0 0	1 0 1 0 1 0 0	0 1 0 0 1 0 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Split	Auto	none	none

Critical Movements Diagram

	A	B
SouthBound	285	131
EastBound	0	0
WestBound	90	6
NorthBound	213	2

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (213 + 131 + 90 + 0) / 1500 = 0.219 LOS A

Developed by Chun Wong, 12/94

APROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:42:03 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: BORA BORA WY I/S No: 6

AM/PM: PM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	3	319	5	160	397	20	1	0	92	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	3	319	5	160	397	20	1	0	92	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 1 0 0	1 0 1 0 1 0 0	0 0 0 1 0 0 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	none	none

Critical Movements Diagram

	A	B
SouthBound	209	160
EastBound	0	0
WestBound	93	1
NorthBound	165	3

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (165 + 160 + 93 + 0) / 1200 = 0.348 LOS A

Developed by Chun Wong, 12/94

APROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:42:03 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY | W/E: ADMIRALTY WY | I/S No: 7

AM/PM: PM | Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	64	104	152	341	210	202	214	1624	126	75	1413	51
AMBIENT												
RELATED												
PROJECT												
TOTAL	64	104	152	341	210	202	214	1624	126	75	1413	51

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	0	0	1	0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	0	1	0	1	0	1	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 210 B: 341

EastBound A: 732 B: 75

WestBound A: 875 B: 214

NorthBound A: 256 B: 64

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (256 □ 341 □ 875 □ 75) / □1500 □ 0.961 LOS □ E

Developed by Chun Wong, 12/94

APROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:42:03 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD | W/E: WASHINGTON BLVD | I/S No: 8

AM/PM: PM | Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	640	1525	320	253	1457	232	319	949	312	169	802	620
AMBIENT												
RELATED												
PROJECT												
TOTAL	640	1525	320	253	1457	232	319	949	312	169	802	620

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	2	0	2	0	1	0	0	2	0	2	0	1	0	0	2	0	2	0	0	1	0	2	0	2	0	0	1	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	OLA

Critical Movements Diagram

SouthBound A: 563 B: 139

EastBound A: 401 B: 93

WestBound A: 475 B: 175

NorthBound A: 615 B: 352

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (352 □ 563 □ 175 □ 401) / □1375 □ 1.014 LOS □ F

Developed by Chun Wong, 12/94

APROJPM

CalcaDB

April 21, 2010 ,Wednesday 01:08:45 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: SR-90 ON/OFF RAMPS I/S No: 9

AM/PM: PM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	1788	218	867	1870	0	170	0	1003	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	1788	218	867	1870	0	170	0	1003	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 2 0 1 0 0	2 0 3 0 0 0 0	2 0 0 0 0 2 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Prot-Fix	□none□	Split	OLA	□none□	□none□

Critical Movements Diagram

SouthBound A: 623 B: 477

EastBound A: 0 B: 0

WestBound A: 75 B: 94

NorthBound A: 669 B: 0

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (669 □ 477 □ 94 □ 0) / □1425 □ 0.800 LOS □ D

Developed by Chun Wong, 12.94

APROJPM

CalcaDB

April 21, 2010 ,Wednesday 01:08:45 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: BALI WY I/S No: 10

AM/PM: PM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	31	1483	208	203	1552	37	70	74	388	41	97	37
AMBIENT									-203			
RELATED												
PROJECT												
TOTAL	31	1483	208	203	1552	37	70	74	185	41	97	37

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	1 0 1 0 1 0 0	1 0 0 0 1 1 0	0 1 0 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	OLA	Perm	Auto

Critical Movements Diagram

SouthBound A: 795 B: 203

EastBound A: 88 B: 41

WestBound A: 130 B: 70

NorthBound A: 846 B: 31

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (846 □ 203 □ 130 □ 41) / □1425 □ 0.786 LOS □ C

Developed by Chun Wong, 12.94

APROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:42:03 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: BALI WY I/S No: 11

AM/PM: PM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	147	1663	16	6	1666	375	5	0	31	402	3	106
AMBIENT												
RELATED												
PROJECT												
TOTAL	147	1663	16	6	1666	375	5	0	31	402	3	106

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	2	0	1	0	0	1	0	2	0	1	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	Auto	Split	Auto

Critical Movements Diagram

SouthBound A: 680 B: 6

EastBound A: 203 B: 203

WestBound A: 36 B: 5

NorthBound A: 560 B: 147

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C $= \dfrac{147 + 680 + 36 + 203}{1375}$ = 0.705 LOS = C

Developed by Chun Wong, 12:94

APROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:42:03 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: MINDANAO WY I/S No: 12

AM/PM: PM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	43	993	80	547	1156	110	355	213	753	156	134	30
AMBIENT												
RELATED												
PROJECT												
TOTAL	43	993	80	547	1156	110	355	213	753	156	134	30

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	1	0	1	0	0	1	0	1	0	1	0	0	1	1	0	0	0	1	0	1	0	0	0	1	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	OLA	Split	Auto

Critical Movements Diagram

SouthBound A: 633 B: 547

EastBound A: 164 B: 156

WestBound A: 284 B: 284

NorthBound A: 537 B: 43

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C $= \dfrac{537 + 547 + 284 + 164}{1375}$ = 1.044 LOS = F

Developed by Chun Wong, 12:94

APROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:42:03 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD | W/E: MINDANAO WY | I/S No: 13

AM/PM: PM | Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	173	1652	306	209	1594	120	393	931	101	0	775	180
AMBIENT												
RELATED												
PROJECT												
TOTAL	173	1652	306	209	1594	120	393	931	101	0	775	180

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 3 0 0 1 0	1 0 2 0 1 0 0	2 0 1 0 1 0 0	0 0 1 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 571 B: 209

EastBound A: 478 B: 0

WestBound A: 516 B: 216

NorthBound A: 551 B: 173

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (551 + 209 + 216 + 478) / 1375 = 0.987 LOS E

Developed by Chun Wong, 12/94

APROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:42:03 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY | W/E: FIJI WY | I/S No: 14

AM/PM: PM | Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	0	937	0	194	0	276	546	122	333	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	937	0	194	0	276	546	122	333	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 0 0 0 0	2 0 0 0 0 1 0	0 0 1 0 0 1 0	1 0 2 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	none	none	Split	Free	Perm	Free	Perm	none

Critical Movements Diagram

SouthBound A: 0 B: 515

EastBound A: 167 B: 122

WestBound A: 276 B: 0

NorthBound A: 0 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (0 + 515 + 276 + 122) / 1500 = 0.539 LOS A

Developed by Chun Wong, 12/94

APROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:42:03 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: FIJI WY I/S No: 15

AM/PM: PM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	845	1902	24	92	2009	146	42	23	40	161	8	1100
AMBIENT												
RELATED												
PROJECT												
TOTAL	845	1902	24	92	2009	146	42	23	40	161	8	1100

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 2 0 1 0 0	1 0 2 0 1 0 0	0 0 0 1 0 0 0	1 0 1 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Free

Critical Movements Diagram

	A	B
SouthBound	718	92
EastBound	8	161
WestBound	105	42
NorthBound	642	465

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (465 □ 718 □ 105 □ 161) / □1425 □ 0.947 LOS □ E

Developed by Chun Wong, 12/94

APROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:42:03 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 EB ON/OFF RAMPS I/S No: 16

AM/PM: PM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	524	859	783	1292	0	0	0	0	7	1034	41
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	524	859	783	1292	0	0	0	0	7	1034	41

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 1 0 1 1 0	2 0 2 0 0 0 0	0 0 0 0 0 0 0	1 0 1 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Prot-Fix	□none□	□none□	□none□	Split	Auto

Critical Movements Diagram

	A	B
SouthBound	646	431
EastBound	538	7
WestBound	0	0
NorthBound	461	0

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (461 □ 431 □ 0 □ 538) / □1425 □ 0.934 LOS □ E

Developed by Chun Wong, 12/94

APROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:42:03 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 WB ON/OFF RAMPS I/S No: 17

AM/PM: PM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	18	513	0	0	1179	60	901	1118	453	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	18	513	0	0	1179	60	901	1118	453	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 0 0 0	0 0 2 0 1 0 0	1 1 1 0 0 1 0	0 0 0 0 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	none	Perm	Auto	Split	Auto	none	none

Critical Movements Diagram

	A	B
SouthBound	413	0
EastBound	0	0
WestBound	673	673
NorthBound	257	18

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (18 + 413 + 673 - 0) / 1425 = 0.705 LOS C

Developed by Chun Wong, 12.94

APROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:42:03 PM

INTERSECTION DATA SUMMARY SHEET

N/S: CULVER BLVD W/E: JEFFERSON BLVD I/S No: 18

AM/PM: PM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	918	240	65	1373	0	1269	0	3	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	918	240	65	1373	0	1269	0	3	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 2 0 0 1 0	0 1 1 0 0 0 0	2 0 0 0 0 1 0	0 0 0 0 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Free	Perm	none	Split	Auto	none	none

Critical Movements Diagram

	A	B
SouthBound	882	65
EastBound	0	0
WestBound	3	698
NorthBound	459	0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (0 + 882 + 698 - 0) / 1500 = 0.983 LOS E

Developed by Chun Wong, 12.94

APROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:42:03 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: JEFFERSON BLVD I/S No: 19

AM/PM: PM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	28	1696	257	510	1789	806	528	437	647	46	200	52
AMBIENT												
RELATED												
PROJECT												
TOTAL	28	1696	257	510	1789	806	528	437	647	46	200	52

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	4	0	0	1	0	2	0	3	0	1	0	0	2	0	2	0	0	2	0	1	0	2	0	1	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	Auto

Critical Movements Diagram

SouthBound A: 806 B: 281

EastBound A: 84 B: 46

WestBound A: 219 B: 290

NorthBound A: 424 B: 28

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (28 □ 806 □ 290 □ 84) / □1375 □ 0.809 LOS □ D

Developed by Chun Wong, 12.94

APROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:42:03 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: WASHINGTON BLVD I/S No: 20

AM/PM: PM Comments: AMBIENT (2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	221	0	0	0	490	954	0	0	922	132
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	221	0	0	0	490	954	0	0	922	132

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	2	0	0	1	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	Auto	□none□	□none□	Perm	□none□	Perm	Auto

Critical Movements Diagram

SouthBound A: 0 B: 0

EastBound A: 461 B: 0

WestBound A: 477 B: 490

NorthBound A: 221 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ A(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (221 □ 0 □ 490 □ 461) / 1200 □ 0.977 LOS □ E

Developed by Chun Wong, 12.94

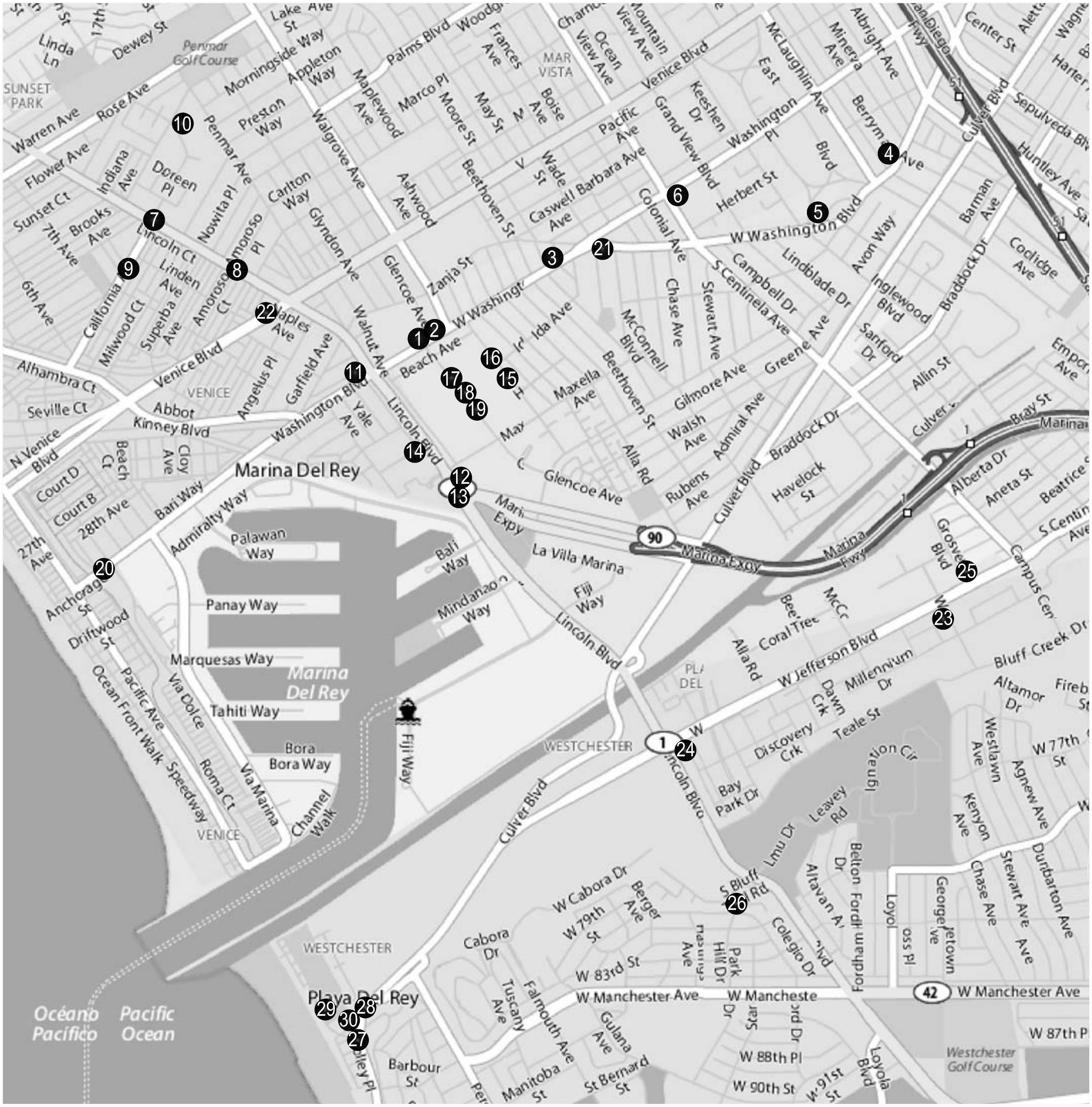
APPENDIX H

Related Projects Information

TABLE H-1
LIST OF RELATED PROJECTS

Map No.	Project Name	Location	Description
1	Glencoe/Washington Mixed-Use Project [1]	13365 Washington Boulevard	Retail 4,183 s.f., Condominium 19 units
2	Live/Work Units [1]	13340 Washington Boulevard	41 unit condominium development with 6 live/work condominium units in Culver City and 35 Units in Los Angeles
3	Baldwin Site [1]	12803 W. Washington Boulevard	New three-story commercial (office and retalil) condominium building (retail ground floor) totaling 37,308 s.f.
4	FAYNSOD Family Trust [1]	11501-11509 Washington Boulevard	6,411 g.s.f. mixed-use project consisting of three retail spaces and three apartment units on the second floor.
5	11957 Washington Bl Office Project [1]	11957 Washington Boulevard	73,569 s.f. three-story office building
6	Washington Place Office Project [1]	12402 Washington Place	Office 30,400 s.f., Specialty Retail 9,300 s.f.
7	Mixed-Use Project [2]	1400 Lincoln Boulevard (assumed 50% complete)	Apartment 280 units, Shopping Center 188,600 s.f.
8	Gas Station w/Convenience Store [2]	2005 Lincoln Boulevard	Service Station w/Convenience Store 6 pumps
9	Charter High School [2]	841 California Avenue	Charter High School 420 students
10	Lincoln Place Project [2]	1077 Elkgrove Avenue	Condominium 99 units
11	Mixed-Use Project [2]	4004 S. Lincoln Boulevard	Condominium 98 units, Retail 6,020 s.f.
12	Via Marina Project [2]	4350 Lincoln Boulevard	Condominium 244 units, Shopping Center 9,000 s.f.; To be removed: Shopping Center -21,038 s.f
13	Mixed-Use Project [2]	4363 Lincoln Boulevard	Condominium 158 units, Shopping Center 3,178 s.f., To be removed: Car Rental Facility -48,000 s.f.
14	Mixed-Use Project [2]	NWC Princeton Drive/Carter Ave	Apartments 298 units; To be removed: Light Manufacturing -24,000 s.f., Office -21,600 s.f., Auto Service/Repair -40,000 s.f.
15	Condominium Project [2]	4155 Redwood Ave	Condominium 118 units
16	Condominium Project [2]	4055, 4063, 4071 S Redwood Avenue	Condominiums 140 units
17	Apartment Project [2]	4080 Glencoe Avenue	Apartment 64 units
18	Del Rey Lofts [2]	4115 Glencoe Avenue and 4133 Redwood Avenue	Condominium 49 units, Apartment 52 units
19	Condominium Project [2]	4131 Glencoe Avenue	Condominium 117 units
20	Apartment Project [2]	330 W Washington Boulevard	Apartment 123 units
21	Condominium Project [1]	4025 Wade Street	Condominiums 4 units
22	Mixed-Use Development Project [2]	1020 Venice Boulevard	Apartment 40 units, 5,000 s.f. Specialty Retail Center
23	The Village at Playa Vista [2]	S/o Jefferson Boulevard/Westlawn Avenue	Office 1,750,000 s.f., Apartment 2600 units, Retail 150,000 s.f., Community Serving Uses 40,000 s.f.
24	Playa Vista Phase 1 [2]	S/o Jefferson Boulevard Boulevard, E/o Lincoln Boulevard (portions assumed completed and occupied)	Includes 3,246 d.u., 2,142,050 s.f. of office use, 25,000 s.f. of retail use, 1,129,900 s.f of production and staging support, and 65,000 s.f. of community serving use.
25	Mixed-Use Project	5550 Grosvenor Boulevard	Apartment 218 units; To be removed: Church -38,987 s.f.
26	Single Family Residential [2]	7400 80th Street (assumed 15 % completed and occupied)	Single Family Residential 120 units
27	Condominium Project [2]	Trolley Place and Vista Del Mar	Condominium 46 units
28	Mixed-Use Project [2]	220 Culver Boulevard	Apartment 63 units, Retail 6,000 s.f.; To be removed: Restaurant -4,000 s.f.
29	Mixed-Use Project [2]	6819 Pacific Avenue	Apartment 29 units, Restaurant 3,000 s.f., Retail 1,000 s.f.
30	Mixed-Use Project [2]	138 Culver Boulevard	Condominium 63 units, Retail 10,051 s.f.
31	LAX Expansion [2]	Los Angeles International Airport	Airport Expansion, 78 MAP

[1] Source: List of related projects provided by City of Culver City
[2] Source: List of related projects provided by Los Angeles Department of Transportation (LADOT)



LEGEND:

LAX EXPANSION → 31

\# - LOCATION OF RELATED PROJECTS

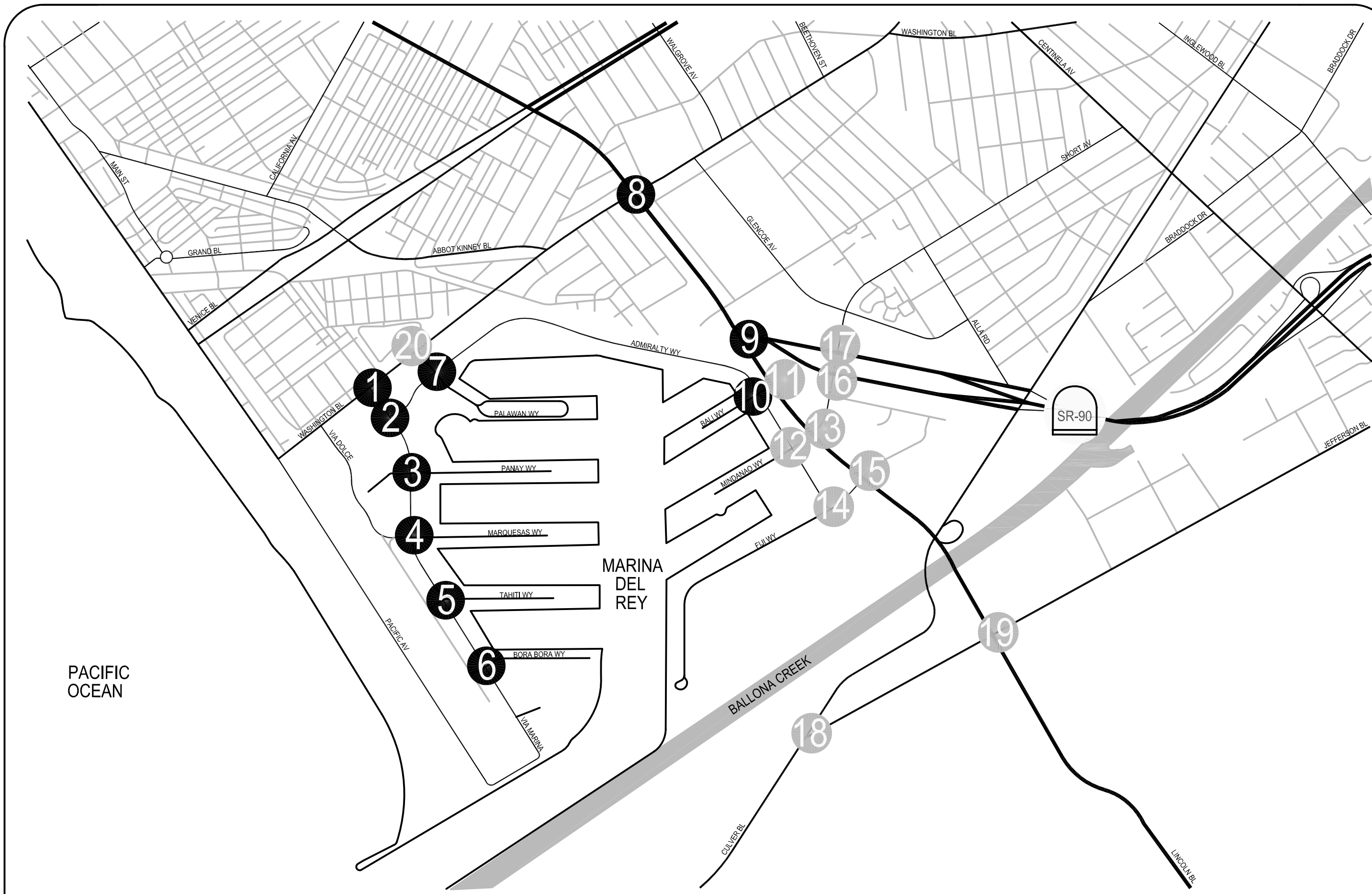
N

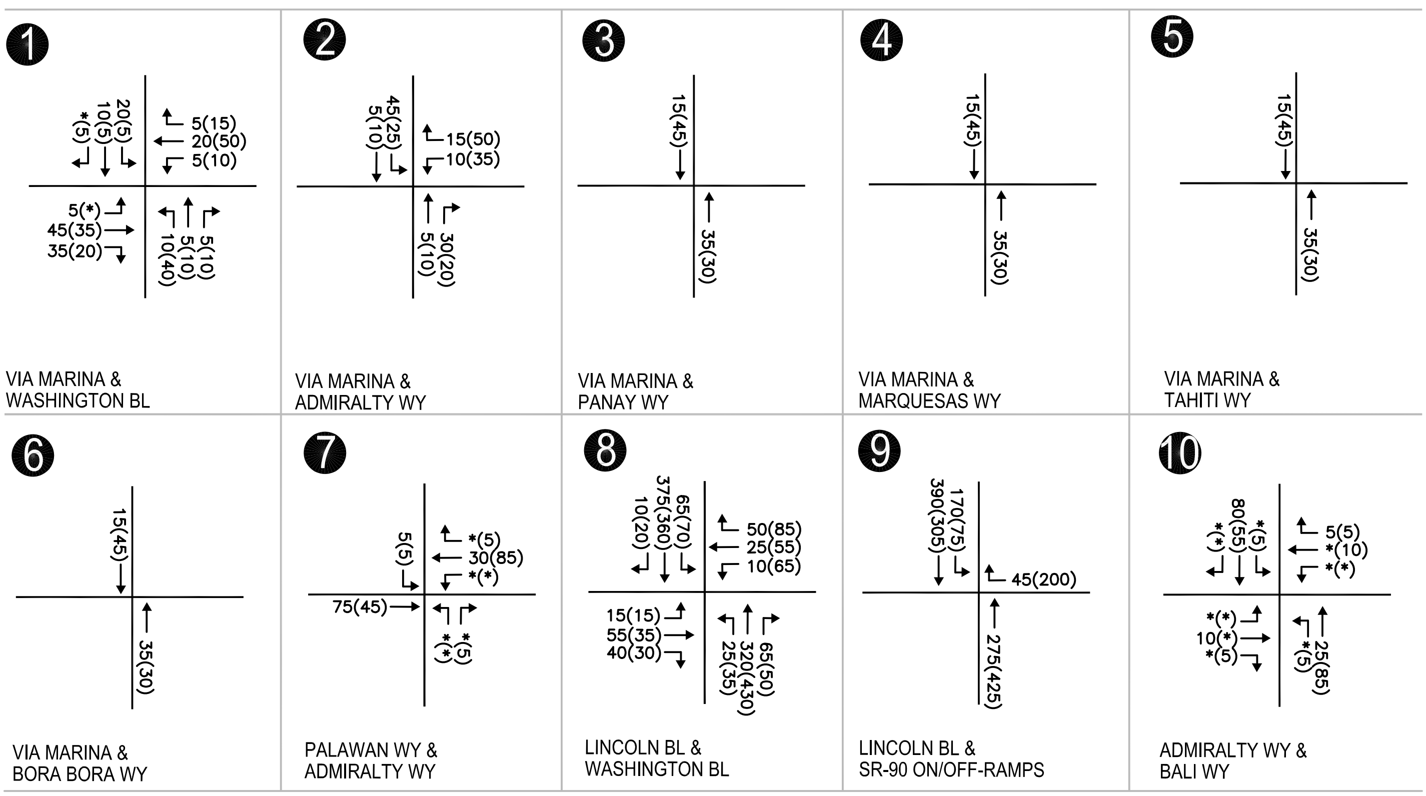
Not to scale

MAP SOURCE: YAHOO MAPS 2009

APPENDIX H-1
LOCATION OF RELATED PROJECTS

RAJU Associates, Inc.





LEGEND:

XXX(XXX) - AM(PM) PEAK HOUR TRAFFIC VOLUMES ROUNDED TO THE NEAREST 5 VEHICLES

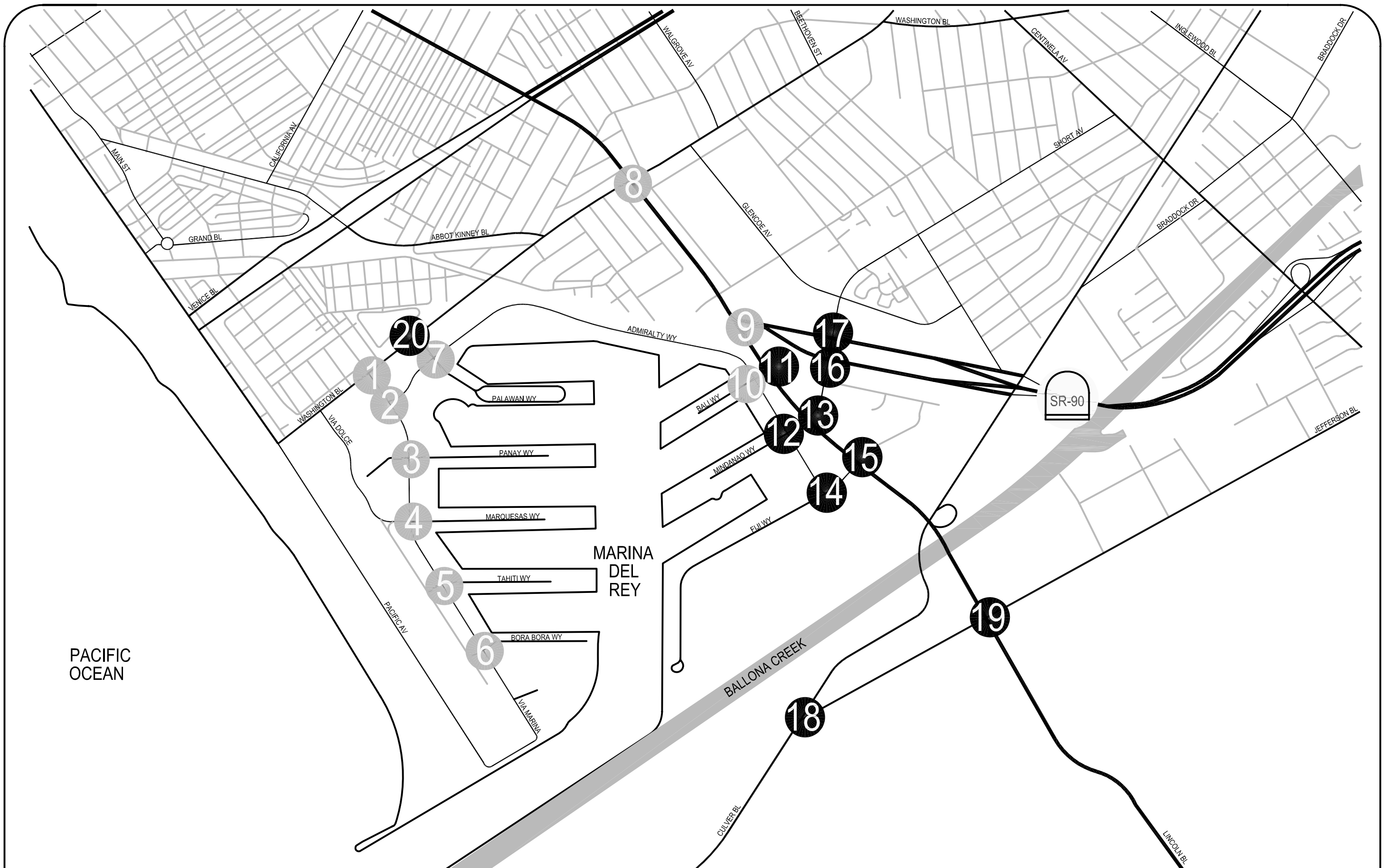
\# - STUDY INTERSECTION

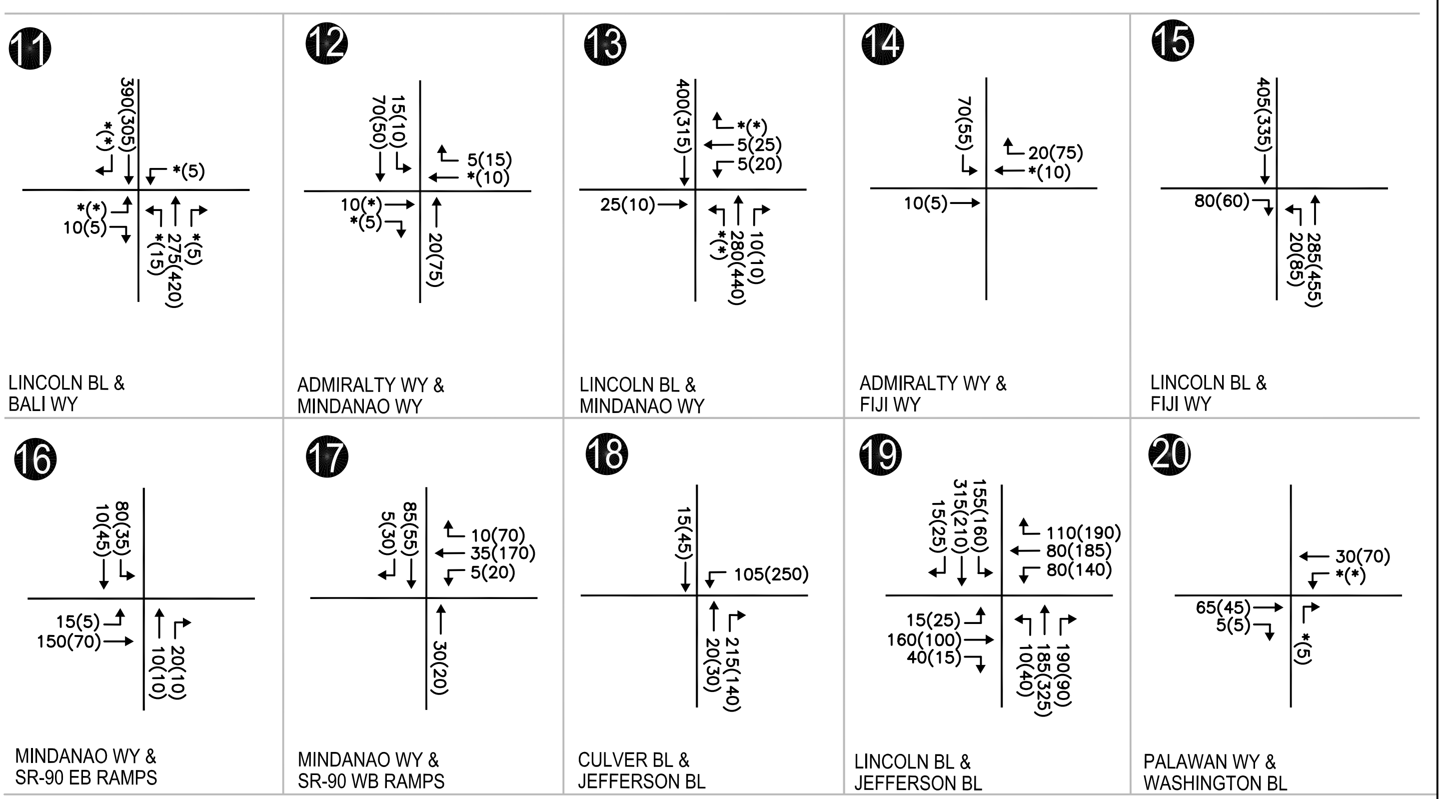
* - NEGLIGIBLE VOLUME

N
Not to scale

APPENDIX H-2
RELATED PROJECTS PEAK HOUR TRAFFIC VOLUMES

RAJU Associates, Inc.





LEGEND:

XXX(XXX) - AM(PM) PEAK HOUR TRAFFIC VOLUMES ROUNDED TO THE NEAREST 5 VEHICLES

\# - STUDY INTERSECTION

* - NEGLIGIBLE VOLUME

N
Not to scale

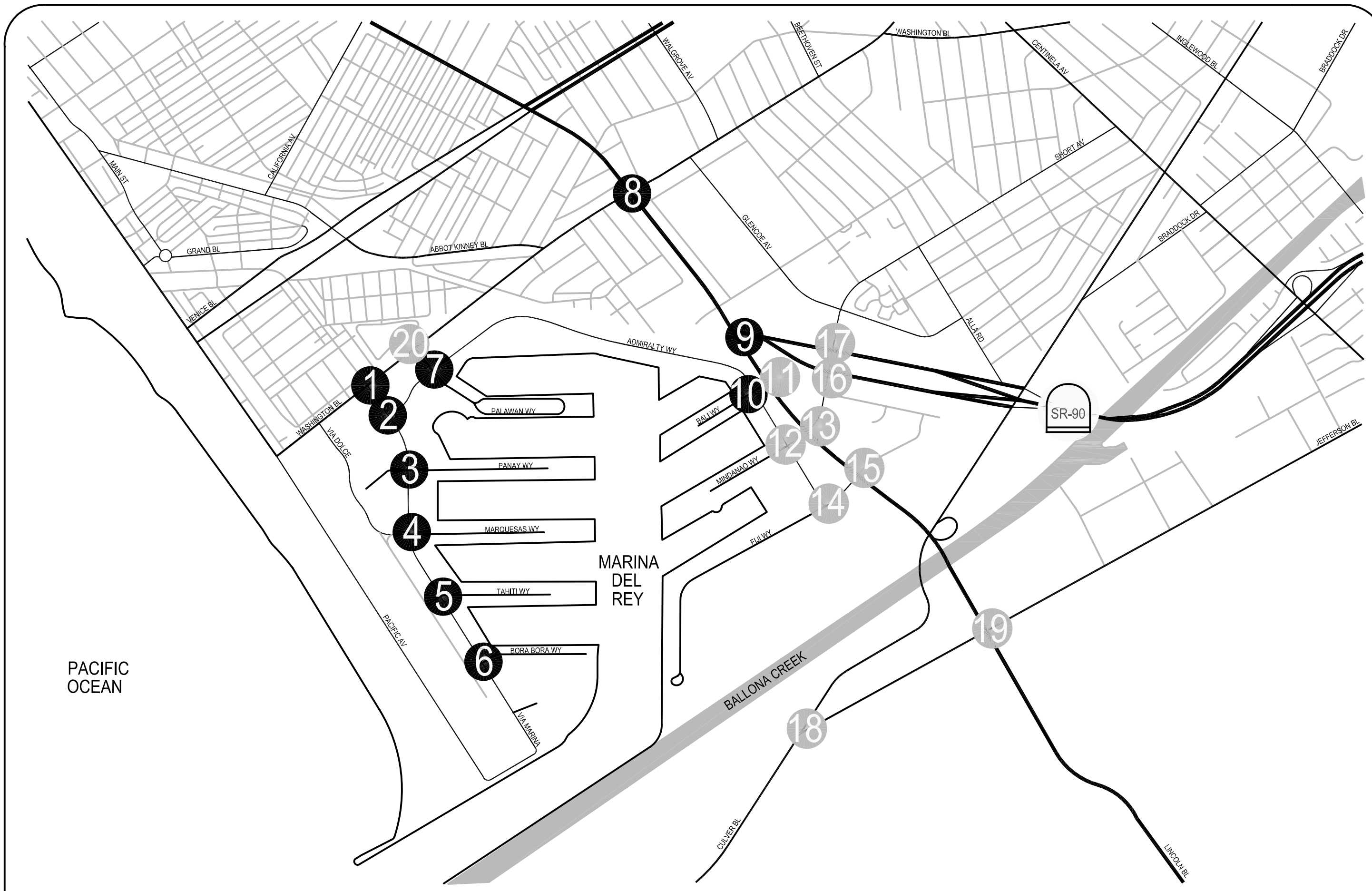
APPENDIX H-3
RELATED PROJECTS PEAK HOUR TRAFFIC VOLUMES

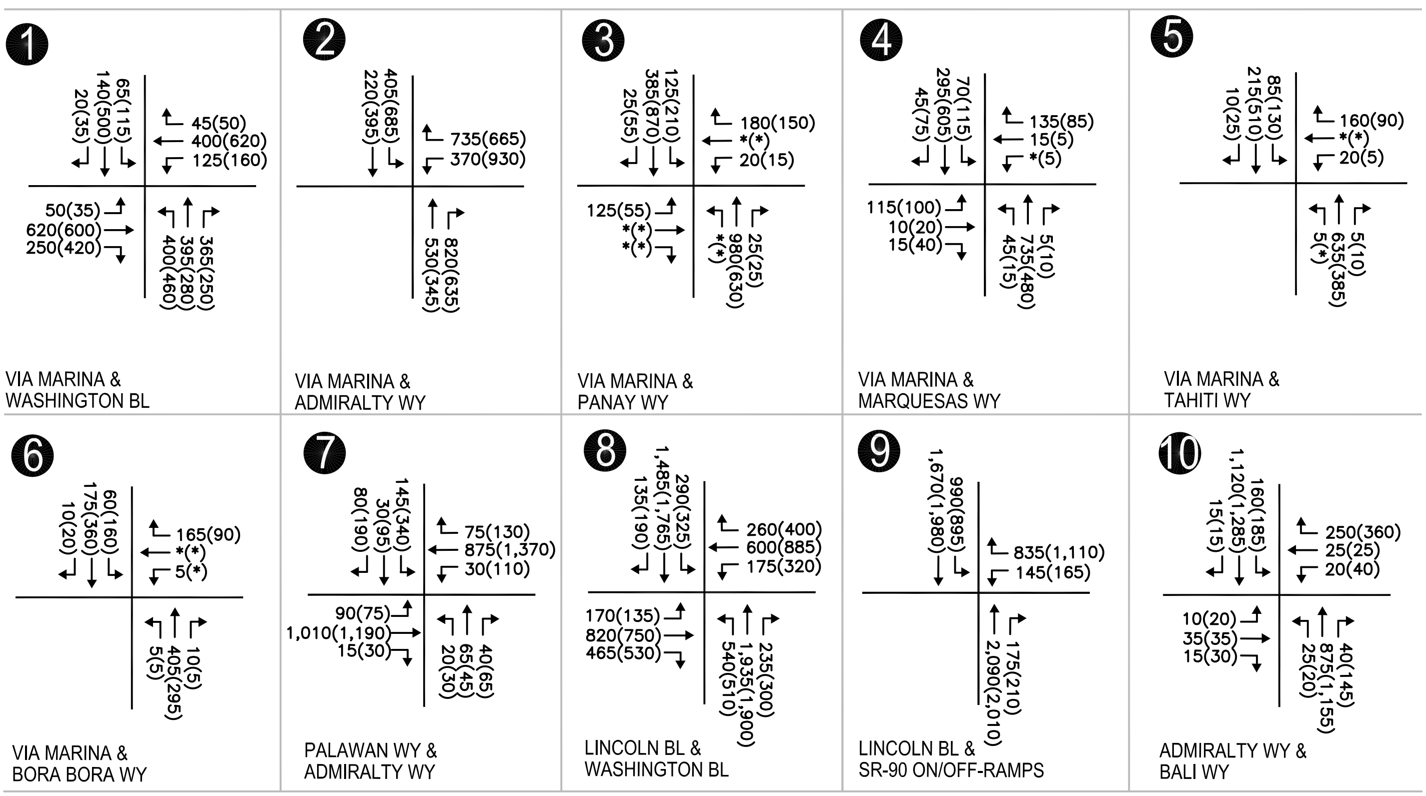
RAJU Associates, Inc.

APPENDIX I

Cumulative (2020) Conditions Traffic Volumes and Level of Service Worksheets

□All signalized intersections include V□C credit of 0.10 to account from ATSAC and ATCS. ATCS credit of 0.03 is not automatically reflected on the capacity calculation worksheets.





LEGEND:

XXX(XXX) - AM(PM) PEAK HOUR TRAFFIC VOLUMES ROUNDED TO THE NEAREST 5 VEHICLES

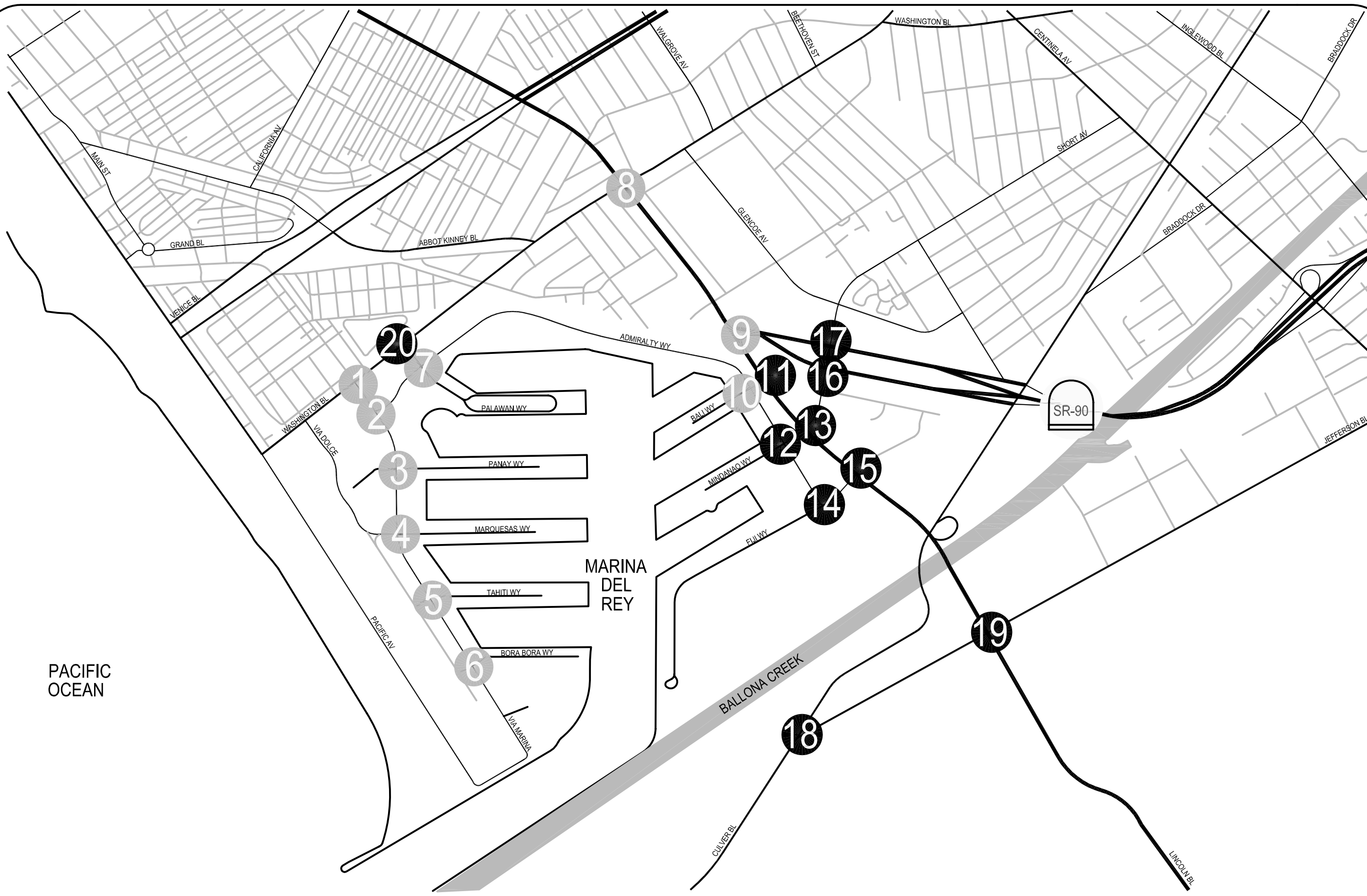
- STUDY INTERSECTION

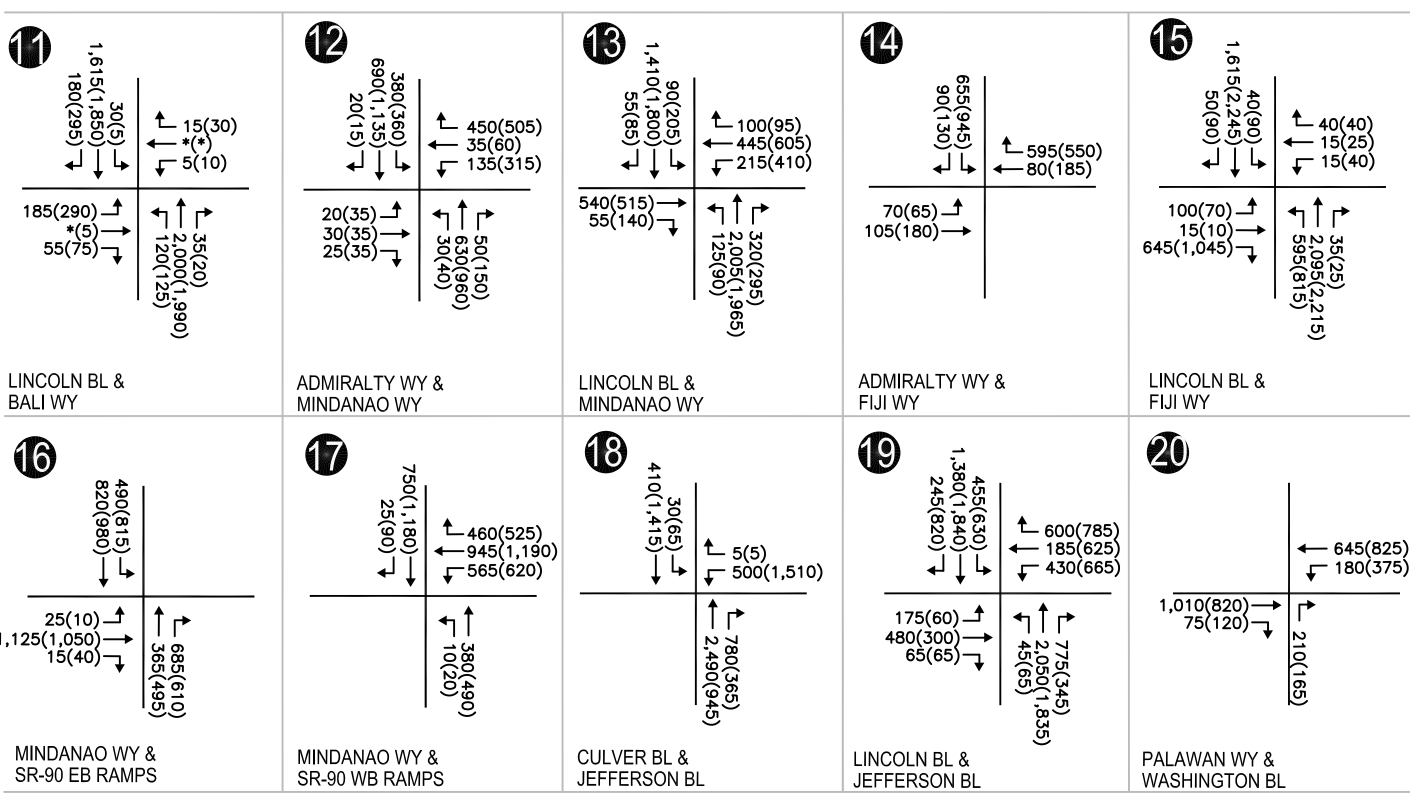
* - NEGLIGIBLE VOLUME

N
Not to scale

APPENDIX I-1
CUMULATIVE (2020) CONDITIONS TRAFFIC VOLUMES

RAJU Associates, Inc.





LEGEND:

XXX(XXX) - AM(PM) PEAK HOUR TRAFFIC VOLUMES ROUNDED TO THE NEAREST 5 VEHICLES

\# - STUDY INTERSECTION

* - NEGLIGIBLE VOLUME

N

Not to scale

APPENDIX I-2

CUMULATIVE (2020) CONDITIONS TRAFFIC VOLUMES

RAJU Associates, Inc.

AM PEAK HOUR

LEVEL OF SERVICE WORKSHEETS

CBASEAM

CalcaDB

March 10, 2010 ,Wednesday 12:48:07 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA / OCEAN AVE W/E: WASHINGTON BLVD I/S No: 1

AM/PM: AM Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	398	393	366	65	140	22	127	398	47	52	619	250
AMBIENT												
RELATED												
PROJECT												
TOTAL	398	393	366	65	140	22	127	398	47	52	619	250

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	2	0	1	0	0	1	0	1	0	0	0	1	0	0	1	0	1	0	1	0	0	1	0	2	0	0	1	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Split	Auto	Split	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 162 B: 65

EastBound A: 310 B: 52

WestBound A: 223 B: 127

NorthBound A: 393 B: 219

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (393 + 162 + 127 + 310) / 1425 = 0.626 LOS B

Developed by Chun Wong, 12 94

CBASEAM

CalcaDB

March 10, 2010 ,Wednesday 12:48:07 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: ADMIRALTY WY I/S No: 2

AM/PM: AM Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	528	821	407	218	0	369	0	737	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	528	821	407	218	0	369	0	737	0	0	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	0	2	0	0	1	0	1	0	3	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Free	Prot-Fix	none	Split	OLA	none	none

Critical Movements Diagram

SouthBound A: 73 B: 407

EastBound A: 0 B: 0

WestBound A: 0 B: 203

NorthBound A: 264 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (264 + 407 + 203 + 0) / 1425 = 0.543 LOS A

Developed by Chun Wong, 12 94

CBASEAM

CalcaDB

March 10, 2010 ,Wednesday 12:48:07 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: PANAY WY I/S No: 3

AM/PM: AM Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	978	23	124	385	25	20	0	181	127	1	2
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	978	23	124	385	25	20	0	181	127	1	2

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	0 1 0 0 0 1 0	0 0 0 1 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	137	124
EastBound	130	127
WestBound	181	20
NorthBound	334	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (334 + 124 + 181 + 127) / 1500 = 0.441 LOS A

Developed by Chun Wong, 12.94

CBASEAM

CalcaDB

March 10, 2010 ,Wednesday 12:48:07 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: MARQUESAS WY I/S No: 4

AM/PM: AM Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	43	733	7	69	297	45	2	16	134	113	10	13
AMBIENT												
RELATED												
PROJECT												
TOTAL	43	733	7	69	297	45	2	16	134	113	10	13

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 0 1 0	0 1 0 0 1 0 0	1 0 1 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	149	69
EastBound	13	113
WestBound	134	2
NorthBound	247	43

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (247 + 69 + 134 + 113) / 1500 = 0.305 LOS A

Developed by Chun Wong, 12.94

CBASEAM

CalcaDB

March 10, 2010 ,Wednesday 12:48:07 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: TAHITI WY I/S No: 5

AM/PM: AM Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	6	637	5	87	213	12	20	2	162	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	6	637	5	87	213	12	20	2	162	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 1 0 0	1 0 1 0 1 0 0	0 1 0 0 1 0 0	0 0 0 0 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Split	Auto	□none□	□none□

Critical Movements Diagram

	A:	B:
SouthBound	113	87
EastBound	0	0
WestBound	162	20
NorthBound	324	6

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (324 □ 87 □ 162 □ 0) / □1500 □ 0.312 LOS □ A

Developed by Chun Wong, 12:94

CBASEAM

CalcaDB

March 10, 2010 ,Wednesday 12:48:07 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: BORA BORA WY I/S No: 6

AM/PM: AM Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	5	407	10	61	173	10	6	1	165	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	5	407	10	61	173	10	6	1	165	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 1 0 0	1 0 1 0 1 0 0	0 0 0 1 0 0 0	0 0 0 0 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	□none□	□none□

Critical Movements Diagram

	A:	B:
SouthBound	92	61
EastBound	0	0
WestBound	172	6
NorthBound	211	5

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (211 □ 61 □ 172 □ 0) / 1200 □ 0.370 LOS □ A

Developed by Chun Wong, 12:94

CBASEAM

CalcaDB

March 10, 2010 ,Wednesday 12:48:07 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: ADMIRALTY WY I/S No: 7

AM/PM: AM Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	20	66	38	143	29	80	30	877	75	88	1009	17
AMBIENT												
RELATED												
PROJECT												
TOTAL	20	66	38	143	29	80	30	877	75	88	1009	17

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 0 0 1 0 0	1 0 1 0 0 1 0	1 0 1 0 1 0 0	1 0 1 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	80	143
EastBound	513	88
WestBound	476	30
NorthBound	104	20

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (104 + 143 + 476 + 88) / 1500 = 0.471 LOS A

Developed by Chun Wong, 12.94

CBASEAM

CalcaDB

March 10, 2010 ,Wednesday 12:48:07 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: WASHINGTON BLVD I/S No: 8

AM/PM: AM Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	542	1934	237	290	1486	135	173	601	262	168	820	463
AMBIENT												
RELATED												
PROJECT												
TOTAL	542	1934	237	290	1486	135	173	601	262	168	820	463

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 2 0 1 0 0	2 0 2 0 1 0 0	2 0 2 0 0 1 0	2 0 2 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	OLA

Critical Movements Diagram

	A	B
SouthBound	540	160
EastBound	410	92
WestBound	301	95
NorthBound	724	298

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (724 + 160 + 95 + 410) / 1375 = 0.940 LOS E

Developed by Chun Wong, 12.94

CBASEAM

CalcaDB

April 21, 2010 ,Wednesday 01:09:48 PM

INTERSECTION DATA SUMMARY SHEET

N/S:	LINCOLN BLVD	W/E:	SR-90 ON/OFF RAMPS	I/S No:	9
AM/PM:	AM	Comments:	CUMULATIVE (2020) WITHOUT PROJECT		
COUNT DATE:		STUDY DATE:		GROWTH FACTOR:	

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	2091	175	991	1672	0	147	0	836	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	2091	175	991	1672	0	147	0	836	0	0	0

LANE							
NORTHBOUND	0	0	2	0	1	0	0
SOUTHBOUND	2	0	3	0	0	0	0
WESTBOUND	2	0	0	0	0	2	0
EASTBOUND	0	0	0	0	0	0	0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Perm	Auto	Prot-Fix	□none□	Split	OLA	□none□	□none□

Critical Movements Diagram

	A:	B:
SouthBound	557	545
EastBound	0	0
WestBound	0	81
NorthBound	755	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ 755 □ 545 □ 81 □ 0 / □1425 □ 0.899 LOS □ D

Developed by Chun Wong, 12/94

CBASEAM

CalcaDB

April 21, 2010 ,Wednesday 01:09:48 PM

INTERSECTION DATA SUMMARY SHEET

N/S:	ADMIRALTY WY	W/E:	BALI WY	I/S No:	10
AM/PM:	AM	Comments:	CUMULATIVE (2020) WITHOUT PROJECT		
COUNT DATE:		STUDY DATE:		GROWTH FACTOR:	

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	23	874	42	162	1120	16	20	24	249	10	37	13
AMBIENT									-162			
RELATED												
PROJECT												
TOTAL	23	874	42	162	1120	16	20	24	87	10	37	13

LANE							
NORTHBOUND	1	0	1	0	1	0	0
SOUTHBOUND	1	0	1	0	1	0	0
WESTBOUND	1	0	0	0	1	1	0
EASTBOUND	0	1	0	0	1	0	0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Prot-Fix	Auto	Prot-Fix	Auto	Perm	OLA	Perm	Auto

Critical Movements Diagram

	A:	B:
SouthBound	568	162
EastBound	30	10
WestBound	56	20
NorthBound	458	23

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ 458 □ 162 □ 56 □ 10 / □1425 □ 0.411 LOS □ A

Developed by Chun Wong, 12/94

CBASEAM

CalcaDB

March 10, 2010 ,Wednesday 12:48:07 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD | W/E: BALI WY | I/S No: 11

AM/PM: AM | Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	119	1999	33	28	1615	180	3	0	14	183	2	54
AMBIENT												
RELATED												
PROJECT												
TOTAL	119	1999	33	28	1615	180	3	0	14	183	2	54

LANE	Northbound	Southbound	Westbound	Eastbound
	1 0 2 0 1 0 0	1 0 2 0 1 0 0	0 0 0 1 0 0 0	1 1 0 0 0 1 0

SIGNAL	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
	Prot-Fix	Auto	Prot-Fix	Auto	Split	Auto	Split	Auto

Critical Movements Diagram

SouthBound A: 598 B: 28

EastBound A: 93 B: 93

WestBound A: 17 B: 3

NorthBound A: 677 B: 119

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C $\frac{119 \quad 598 \quad 17 \quad 93}{1375}$ 0.531 LOS A

Developed by Chun Wong, 12/94

CBASEAM

CalcaDB

March 10, 2010 ,Wednesday 12:48:07 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY | W/E: MINDANAO WY | I/S No: 12

AM/PM: AM | Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	29	632	52	380	690	20	136	37	451	22	31	26
AMBIENT												
RELATED												
PROJECT												
TOTAL	29	632	52	380	690	20	136	37	451	22	31	26

LANE	Northbound	Southbound	Westbound	Eastbound
	1 0 1 0 1 0 0	1 0 1 0 1 0 0	1 1 0 0 0 1 0	1 0 0 0 1 0 0

SIGNAL	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
	Prot-Fix	Auto	Prot-Fix	Auto	Split	OLA	Split	Auto

Critical Movements Diagram

SouthBound A: 355 B: 380

EastBound A: 57 B: 22

WestBound A: 87 B: 87

NorthBound A: 342 B: 29

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C $\frac{342 \quad 380 \quad 87 \quad 57}{1375}$ 0.560 LOS A

Developed by Chun Wong, 12/94

CBASEAM

CalcaDB

March 10, 2010 ,Wednesday 12:48:07 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: MINDANAO WY I/S No: 13

AM/PM: AM Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	124	2007	319	92	1411	57	214	443	100	0	542	53
AMBIENT												
RELATED												
PROJECT												
TOTAL	124	2007	319	92	1411	57	214	443	100	0	542	53

LANE	NB							SB							WB							EB						
	1	0	3	0	0	1	0	1	0	2	0	1	0	0	2	0	1	0	1	0	0	0	0	1	0	1	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 489 B: 92

EastBound A: 298 B: 0

WestBound A: 272 B: 118

NorthBound A: 669 B: 124

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (669 + 92 + 118 + 298) / 1375 = 0.786 LOS C

Developed by Chun Wong, 12/94

CBASEAM

CalcaDB

March 10, 2010 ,Wednesday 12:48:07 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: FIJI WY I/S No: 14

AM/PM: AM Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	0	655	0	91	0	82	597	71	107	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	655	0	91	0	82	597	71	107	0

LANE	NB							SB							WB							EB						
	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	2	0	0	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	none	none	Split	Free	Perm	Free	Perm	none

Critical Movements Diagram

SouthBound A: 0 B: 360

EastBound A: 54 B: 71

WestBound A: 82 B: 0

NorthBound A: 0 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (0 + 360 + 82 + 71) / 1500 = 0.272 LOS A

Developed by Chun Wong, 12/94

CBASEAM

CalcaDB

March 10, 2010 ,Wednesday 12:48:07 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: FIJI WY I/S No: 15

AM/PM: AM Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	597	2097	35	41	1615	52	16	14	41	98	17	645
AMBIENT												
RELATED												
PROJECT												
TOTAL	597	2097	35	41	1615	52	16	14	41	98	17	645

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	2	0	2	0	1	0	0	1	0	2	0	1	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Free

Critical Movements Diagram

SouthBound A: 556 B: 41

EastBound A: 17 B: 98

WestBound A: 71 B: 16

NorthBound A: 711 B: 328

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (328 + 556 + 71 + 98) / 1425 = 0.669 LOS B

Developed by Chun Wong, 12.94

CBASEAM

CalcaDB

March 10, 2010 ,Wednesday 12:48:07 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 EB ON/OFF RAMPS I/S No: 16

AM/PM: AM Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	364	686	492	821	0	0	0	0	26	1127	13
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	364	686	492	821	0	0	0	0	26	1127	13

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	0	1	0	1	1	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Prot-Fix	none	none	none	Split	Auto

Critical Movements Diagram

SouthBound A: 411 B: 271

EastBound A: 570 B: 26

WestBound A: 0 B: 0

NorthBound A: 350 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (350 + 271 + 0 + 570) / 1425 = 0.766 LOS C

Developed by Chun Wong, 12.94

CBASEAM

CalcaDB

March 10, 2010 ,Wednesday 12:48:07 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY | W/E: SR-90 WB ON/OFF RAMPS | I/S No: 17

AM/PM: AM | Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	12	379	0	0	748	26	565	943	460	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	12	379	0	0	748	26	565	943	460	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 0 0 0	0 0 2 0 1 0 0	1 1 1 0 0 1 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	none	Perm	Auto	Split	Auto	none	none

Critical Movements Diagram

	A	B
SouthBound	258	0
EastBound	0	0
WestBound	503	503
NorthBound	190	12

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (12 + 258 + 503 − 0) / 1425 = 0.472 LOS A

Developed by Chun Wong, 12/94

CBASEAM

CalcaDB

March 10, 2010 ,Wednesday 12:48:07 PM

INTERSECTION DATA SUMMARY SHEET

N/S: CULVER BLVD | W/E: JEFFERSON BLVD | I/S No: 18

AM/PM: AM | Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	2491	780	30	408	0	502	0	4	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	2491	780	30	408	0	502	0	4	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 2 0 0 1 0	0 1 1 0 0 0 0	2 0 0 0 0 1 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Free	Perm	none	Split	Auto	none	none

Critical Movements Diagram

	A	B
SouthBound	294	30
EastBound	0	0
WestBound	4	276
NorthBound	1246	0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (1246 + 30 + 276 − 0) / 1500 = 0.965 LOS E

Developed by Chun Wong, 12/94

CBASEAM

CalcaDB

March 10, 2010 ,Wednesday 12:48:07 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: JEFFERSON BLVD I/S No: 19

AM/PM: AM Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	46	2048	773	453	1378	245	428	187	602	174	480	66
AMBIENT												
RELATED												
PROJECT												
TOTAL	46	2048	773	453	1378	245	428	187	602	174	480	66

LANE	NB	SB	WB	EB
	1 0 4 0 0 1 0	2 0 3 0 1 0 0	2 0 2 0 0 2 0	1 0 2 0 1 0 0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	Auto

Critical Movements Diagram

SouthBound A: 406 B: 249

EastBound A: 182 B: 174

WestBound A: 94 B: 235

NorthBound A: 538 B: 46

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (538 + 249 + 235 + 182) / 1375 = 0.806 LOS D

Developed by Chun Wong, 12 94

CBASEAM

CalcaDB

March 10, 2010 ,Wednesday 12:48:07 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: WASHINGTON BLVD I/S No: 20

AM/PM: AM Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	212	0	0	0	178	645	0	0	1012	74
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	212	0	0	0	178	645	0	0	1012	74

LANE	NB	SB	WB	EB
	0 0 0 0 0 1 0	0 0 0 0 0 0 0	1 0 2 0 0 0 0	0 0 2 0 0 1 0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Split	Auto	none	none	Perm	none	Perm	Auto

Critical Movements Diagram

SouthBound A: 0 B: 0

EastBound A: 506 B: 0

WestBound A: 323 B: 178

NorthBound A: 212 B: 0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (212 + 0 + 178 + 506) / 1200 = 0.747 LOS C

Developed by Chun Wong, 12 94

PM PEAK HOUR

LEVEL OF SERVICE WORKSHEETS

CBASEPM

CalcaDB

March 10, 2010 ,Wednesday 12:48:29 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA / OCEAN AVE W/E: WASHINGTON BLVD I/S No: 1

AM/PM: PM Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	462	281	252	113	499	34	162	622	50	33	600	419
AMBIENT												
RELATED												
PROJECT												
TOTAL	462	281	252	113	499	34	162	622	50	33	600	419

LANE	NB	SB	WB	EB
	2 0 1 0 0 1 0	1 0 0 0 1 0 0	1 0 1 0 1 0 0	1 0 2 0 0 1 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Split	Auto	Split	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 533 B: 113

EastBound A: 300 B: 33

WestBound A: 336 B: 162

NorthBound A: 281 B: 254

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ A(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (281 □ 533 □ 162 □ 300) / □1425 □ 0.825 LOS □ D

Developed by Chun Wong, 12/94

CBASEPM

CalcaDB

March 10, 2010 ,Wednesday 12:48:29 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: ADMIRALTY WY I/S No: 2

AM/PM: PM Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	345	635	684	396	0	932	0	665	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	345	635	684	396	0	932	0	665	0	0	0

LANE	NB	SB	WB	EB
	0 0 2 0 0 1 0	1 0 3 0 0 0 0	2 0 0 0 0 2 0	0 0 0 0 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Free	Prot-Fix	□none□	Split	OLA	□none□	□none□

Critical Movements Diagram

SouthBound A: 132 B: 684

EastBound A: 0 B: 0

WestBound A: 0 B: 513

NorthBound A: 173 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (173 □ 684 □ 513 □ 0) / □1425 □ 0.891 LOS □ D

Developed by Chun Wong, 12/94

CBASEPM

CalcaDB

March 10, 2010 ,Wednesday 12:48:29 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: PANAY WY I/S No: 3

AM/PM: PM Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	1	632	27	210	870	53	15	2	151	53	1	1
AMBIENT												
RELATED												
PROJECT												
TOTAL	1	632	27	210	870	53	15	2	151	53	1	1

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	0 1 0 0 0 1 0	0 0 0 1 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 308 B: 210

EastBound A: 55 B: 53

WestBound A: 151 B: 15

NorthBound A: 220 B: 1

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (220 + 210 + 151 + 53) / 1500 = 0.353 LOS A

Developed by Chun Wong, 12.94

CBASEPM

CalcaDB

March 10, 2010 ,Wednesday 12:48:29 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: MARQUESAS WY I/S No: 4

AM/PM: PM Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	16	482	11	117	603	75	5	5	86	98	19	38
AMBIENT												
RELATED												
PROJECT												
TOTAL	16	482	11	117	603	75	5	5	86	98	19	38

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 0 1 0	0 1 0 0 1 0 0	1 0 1 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 302 B: 117

EastBound A: 38 B: 98

WestBound A: 86 B: 5

NorthBound A: 164 B: 16

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (16 + 302 + 86 + 98) / 1500 = 0.265 LOS A

Developed by Chun Wong, 12.94

CBASEPM

CalcaDB

March 10, 2010 ,Wednesday 12:48:29 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: TAHITI WY I/S No: 5

AM/PM: PM Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	2	385	12	131	510	25	6	0	90	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	2	385	12	131	510	25	6	0	90	0	0	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	1	0	0	1	0	0	1	0	1	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Split	Auto	none	none

Critical Movements Diagram

SouthBound A: 268 B: 131

EastBound A: 0 B: 0

WestBound A: 90 B: 6

NorthBound A: 201 B: 2

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ $\frac{201 \ □ \ 131 \ □ \ 90 \ □ \ 0}{□1500}$ □ 0.211 LOS □ A

Developed by Chun Wong, 12/94

CBASEPM

CalcaDB

March 10, 2010 ,Wednesday 12:48:29 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: BORA BORA WY I/S No: 6

AM/PM: PM Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	3	295	5	160	362	20	1	0	92	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	3	295	5	160	362	20	1	0	92	0	0	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	1	0	0	1	0	0	1	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	none	none

Critical Movements Diagram

SouthBound A: 191 B: 160

EastBound A: 0 B: 0

WestBound A: 93 B: 1

NorthBound A: 153 B: 3

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ $\frac{153 \ □ \ 160 \ □ \ 93 \ □ \ 0}{1200}$ □ 0.338 LOS □ A

Developed by Chun Wong, 12/94

CBASEPM

CalcaDB

March 10, 2010 ,Wednesday 12:48:29 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: ADMIRALTY WY I/S No: 7

AM/PM: PM Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	31	45	65	342	94	192	112	1369	131	75	1190	29
AMBIENT												
RELATED												
PROJECT												
TOTAL	31	45	65	342	94	192	112	1369	131	75	1190	29

LANE	NB	SB	WB	EB
	1 0 0 0 1 0 0	1 0 1 0 0 1 0	1 0 1 0 1 0 0	1 0 1 0 1 0 0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A:	B:
SouthBound	192	342
EastBound	610	75
WestBound	750	112
NorthBound	110	31

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (110 + 342 + 750 + 75) / 1500 = 0.781 LOS C

Developed by Chun Wong, 12.94

CBASEPM

CalcaDB

March 10, 2010 ,Wednesday 12:48:29 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: WASHINGTON BLVD I/S No: 8

AM/PM: PM Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	509	1901	301	323	1766	188	319	883	398	137	750	532
AMBIENT												
RELATED												
PROJECT												
TOTAL	509	1901	301	323	1766	188	319	883	398	137	750	532

LANE	NB	SB	WB	EB
	2 0 2 0 1 0 0	2 0 2 0 1 0 0	2 0 2 0 0 1 0	2 0 2 0 0 1 0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	OLA

Critical Movements Diagram

	A:	B:
SouthBound	651	178
EastBound	375	75
WestBound	442	175
NorthBound	734	280

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (280 + 651 + 175 + 375) / 1375 = 1.007 LOS F

Developed by Chun Wong, 12.94

CBASEPM

CalcaDB

April 21, 2010 ,Wednesday 01:10:15 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: SR-90 ON/OFF RAMPS I/S No: 9

AM/PM: PM Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	2009	211	897	1981	0	164	0	1112	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	2009	211	897	1981	0	164	0	1112	0	0	0

LANE: NB 0 0 2 0 1 0 0; SB 2 0 3 0 0 0 0; WB 2 0 0 0 0 2 0; EB 0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Prot-Fix	none	Split	OLA	none	none

Critical Movements Diagram

	A	B
SouthBound	660	493
EastBound	0	0
WestBound	118	90
NorthBound	740	0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (740 + 493 + 118 + 0) / 1425 = 0.878 LOS D

Developed by Chun Wong, 12/94

CBASEPM

CalcaDB

April 21, 2010 ,Wednesday 01:10:15 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: BALI WY I/S No: 10

AM/PM: PM Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	22	1153	143	184	1283	16	42	27	360	18	37	31
AMBIENT									-184			
RELATED												
PROJECT												
TOTAL	22	1153	143	184	1283	16	42	27	176	18	37	31

LANE: NB 1 0 1 0 1 0 0; SB 1 0 1 0 1 0 0; WB 1 0 0 0 1 1 0; EB 0 1 0 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	OLA	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	650	184
EastBound	43	18
WestBound	102	42
NorthBound	648	22

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (648 + 184 + 102 + 18) / 1425 = 0.598 LOS A

Developed by Chun Wong, 12/94

CBASEPM

CalcaDB

March 10, 2010 ,Wednesday 12:48:29 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: BALI WY I/S No: 11

AM/PM: PM Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	125	1988	20	6	1852	293	12	0	31	290	3	75
AMBIENT												
RELATED												
PROJECT												
TOTAL	125	1988	20	6	1852	293	12	0	31	290	3	75

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	0 0 0 1 0 0 0	1 1 0 0 0 1 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	Auto	Split	Auto

Critical Movements Diagram

	SouthBound	EastBound	WestBound	NorthBound
A:	715	147	43	669
B:	6	147	12	125

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C $\frac{125 \quad 715 \quad 43 \quad 147}{1375}$ 0.679 LOS B

Developed by Chun Wong, 12:94

CBASEPM

CalcaDB

March 10, 2010 ,Wednesday 12:48:29 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: MINDANAO WY I/S No: 12

AM/PM: PM Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	42	958	148	359	1134	16	317	59	504	36	37	35
AMBIENT												
RELATED												
PROJECT												
TOTAL	42	958	148	359	1134	16	317	59	504	36	37	35

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	1 0 1 0 1 0 0	1 1 0 0 0 1 0	1 0 0 0 1 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	OLA	Split	Auto

Critical Movements Diagram

	SouthBound	EastBound	WestBound	NorthBound
A:	575	72	188	553
B:	359	36	188	42

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C $\frac{553 \quad 359 \quad 188 \quad 72}{1375}$ 0.782 LOS C

Developed by Chun Wong, 12:94

CBASEPM

CalcaDB

March 10, 2010 ,Wednesday 12:48:29 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: MINDANAO WY I/S No: 13

AM/PM: PM Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	91	1967	295	203	1798	84	411	607	94	0	515	139
AMBIENT												
RELATED												
PROJECT												
TOTAL	91	1967	295	203	1798	84	411	607	94	0	515	139

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 3 0 0 1 0	1 0 2 0 1 0 0	2 0 1 0 1 0 0	0 0 1 0 1 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	627	203
EastBound	327	0
WestBound	351	226
NorthBound	656	91

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (656 + 203 + 226 + 327) / 1375 = 0.957 LOS E

Developed by Chun Wong, 12.94

CBASEPM

CalcaDB

March 10, 2010 ,Wednesday 12:48:29 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: FIJI WY I/S No: 14

AM/PM: PM Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	0	946	0	129	0	183	551	65	178	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	946	0	129	0	183	551	65	178	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 0 0 0 0	2 0 0 0 0 1 0	0 0 1 0 0 1 0	1 0 2 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	none	none	Split	Free	Perm	Free	Perm	none

Critical Movements Diagram

	A	B
SouthBound	0	520
EastBound	89	65
WestBound	183	0
NorthBound	0	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (0 + 520 + 183 + 65) / 1500 = 0.442 LOS A

Developed by Chun Wong, 12.94

CBASEPM

CalcaDB

March 10, 2010 ,Wednesday 12:48:29 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: FIJI WY I/S No: 15

AM/PM: PM Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	814	2217	24	92	2246	89	42	23	40	70	8	1043
AMBIENT												
RELATED												
PROJECT												
TOTAL	814	2217	24	92	2246	89	42	23	40	70	8	1043

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	2	0	2	0	1	0	0	1	0	2	0	1	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Free

Critical Movements Diagram

SouthBound A: 778 B: 92

EastBound A: 8 B: 70

WestBound A: 105 B: 42

NorthBound A: 747 B: 448

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C $\frac{448 \quad 778 \quad 105 \quad 70}{1425}$ 0.913 LOS E

Developed by Chun Wong, 12 94

CBASEPM

CalcaDB

March 10, 2010 ,Wednesday 12:48:29 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 EB ON/OFF RAMPS I/S No: 16

AM/PM: PM Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	496	611	817	979	0	0	0	0	12	1052	41
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	496	611	817	979	0	0	0	0	12	1052	41

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	0	1	0	1	1	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Prot-Fix	none	none	none	Split	Auto

Critical Movements Diagram

SouthBound A: 490 B: 449

EastBound A: 547 B: 12

WestBound A: 0 B: 0

NorthBound A: 369 B: 0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C $\frac{369 \quad 449 \quad 0 \quad 547}{1425}$ 0.888 LOS D

Developed by Chun Wong, 12 94

CBASEPM

CalcaDB

March 10, 2010 ,Wednesday 12:48:29 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 WB ON/OFF RAMPS I/S No: 17

AM/PM: PM Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	18	491	0	0	1181	91	621	1190	525	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	18	491	0	0	1181	91	621	1190	525	0	0	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	2	0	0	0	0	0	0	2	0	1	0	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	none	Perm	Auto	Split	Auto	none	none

Critical Movements Diagram

	A	B
SouthBound	424	0
EastBound	0	0
WestBound	604	604
NorthBound	246	18

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) A(E/B)

$$V/C = \frac{18 \quad 424 \quad 604 \quad 0}{1425} = 0.664 \qquad LOS\ B$$

Developed by Chun Wong, 12:94

CBASEPM

CalcaDB

March 10, 2010 ,Wednesday 12:48:29 PM

INTERSECTION DATA SUMMARY SHEET

N/S: CULVER BLVD W/E: JEFFERSON BLVD I/S No: 18

AM/PM: PM Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	947	365	65	1417	0	1509	0	3	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	947	365	65	1417	0	1509	0	3	0	0	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	0	2	0	0	1	0	0	1	1	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Free	Perm	none	Split	Auto	none	none

Critical Movements Diagram

	A	B
SouthBound	904	65
EastBound	0	0
WestBound	3	830
NorthBound	474	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

$$V/C = \frac{0 \quad 904 \quad 830 \quad 0}{1500} = 1.086 \qquad LOS\ F$$

Developed by Chun Wong, 12:94

CBASEPM

CalcaDB

March 10, 2010 ,Wednesday 12:48:29 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD   W/E: JEFFERSON BLVD   I/S No: 19

AM/PM: PM   Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	66	1833	346	629	1838	821	666	624	787	58	299	66
AMBIENT												
RELATED												
PROJECT												
TOTAL	66	1833	346	629	1838	821	666	624	787	58	299	66

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	4	0	0	1	0	2	0	3	0	1	0	0	2	0	2	0	0	2	0	1	0	2	0	1	0	0

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	Auto

Critical Movements Diagram

	A	B
SouthBound	821	346
EastBound	122	58
WestBound	312	366
NorthBound	458	66

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

$$V/C = \frac{66 + 821 + 366 + 122}{1375} = 0.930$$

LOS E

Developed by Chun Wong, 12 94

CBASEPM

CalcaDB

March 10, 2010 ,Wednesday 12:48:29 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY   W/E: WASHINGTON BLVD   I/S No: 20

AM/PM: PM   Comments: CUMULATIVE (2020) WITHOUT PROJECT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	167	0	0	0	375	824	0	0	820	122
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	167	0	0	0	375	824	0	0	820	122

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	2	0	0	1	0

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Split	Auto	none	none	Perm	none	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	0	0
EastBound	410	0
WestBound	412	375
NorthBound	167	0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

$$V/C = \frac{167 + 0 + 375 + 410}{1200} = 0.793$$

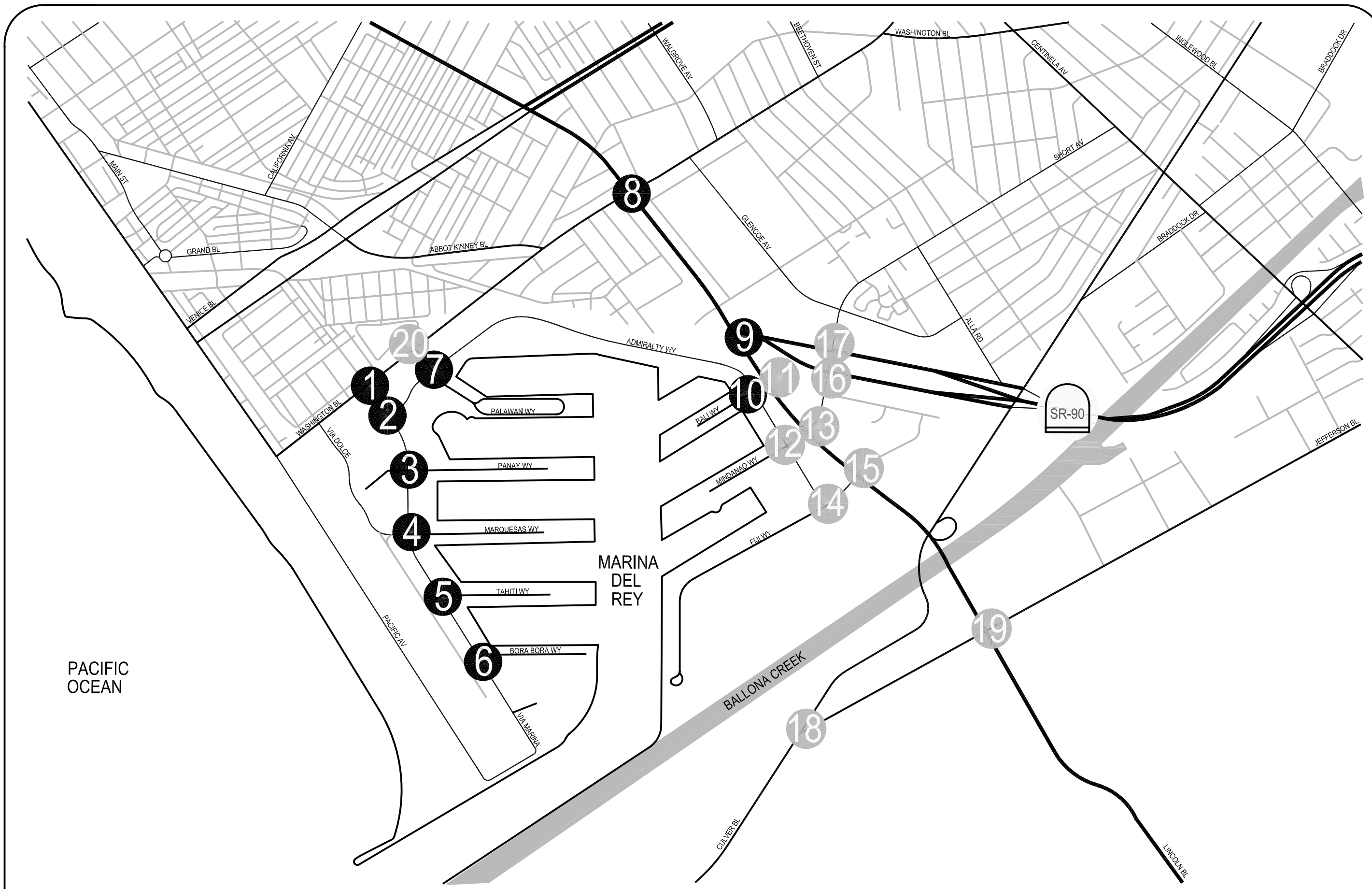
LOS C

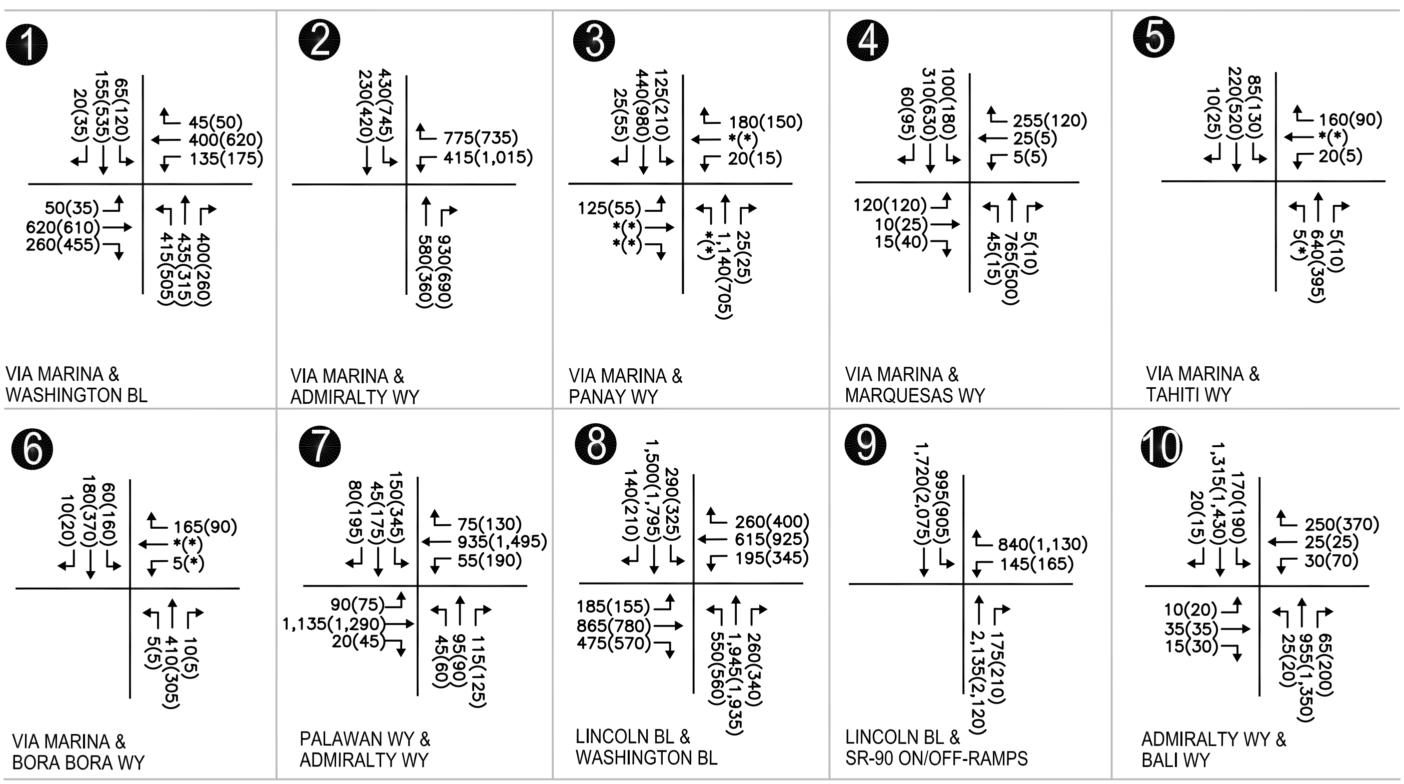
Developed by Chun Wong, 12 94

APPENDIX J

Cumulative (2020) Conditions with Pipeline Projects Traffic Volumes and Level of Service Worksheets

All signalized intersections include V/C credit of 0.10 to account from ATSAC and ATCS. ATCS credit of 0.03 is not automatically reflected on the capacity calculation worksheets.





LEGEND:

XXX(XXX) - AM(PM) PEAK HOUR TRAFFIC VOLUMES ROUNDED TO THE NEAREST 5 VEHICLES

- STUDY INTERSECTION

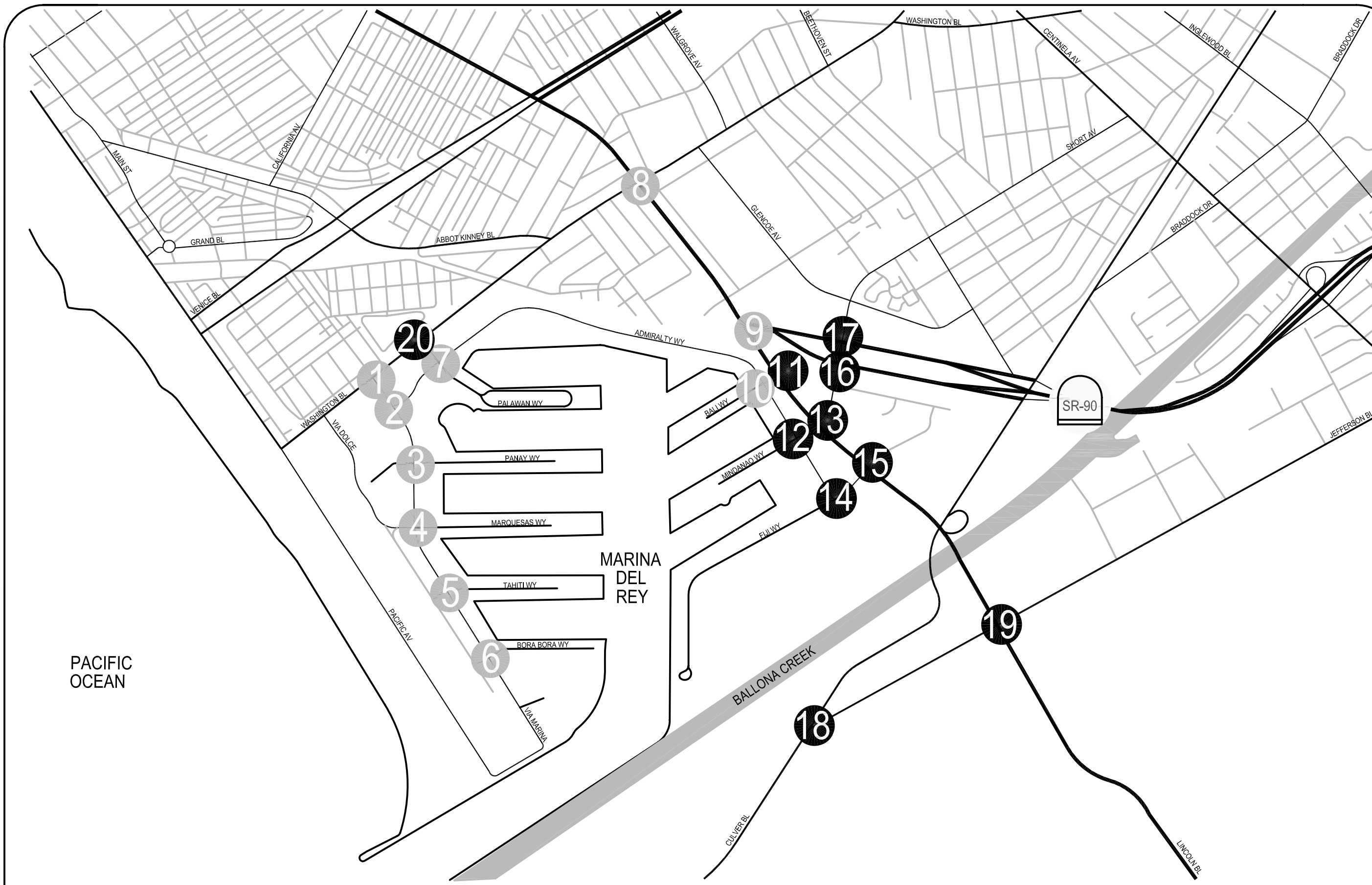
* - NEGLIGIBLE VOLUME

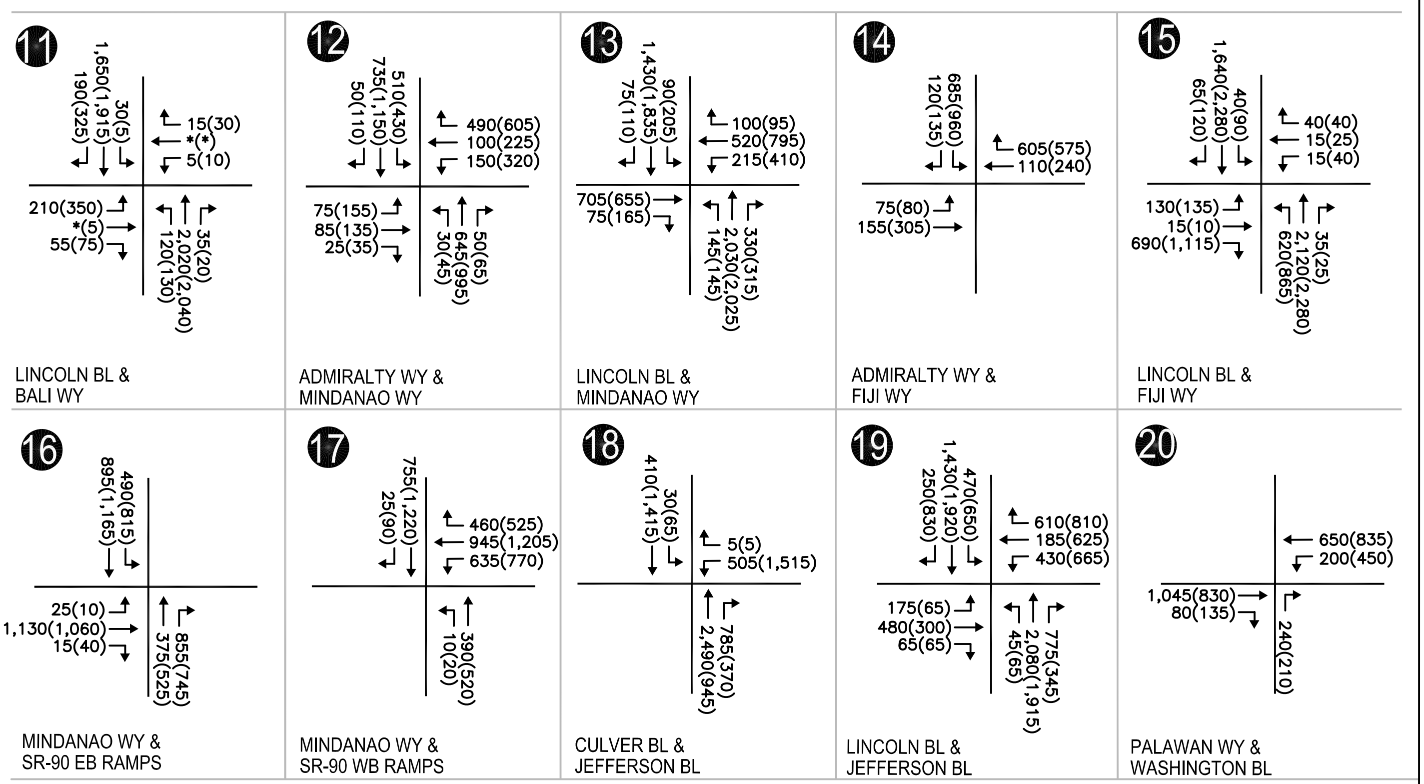
N

Not to scale

APPENDIX J-1
CUMULATIVE (2020) CONDITIONS WITH PIPELINE PROJECTS
TRAFFIC VOLUMES

RAJU Associates, Inc.





LEGEND:

XXX(XXX) - AM(PM) PEAK HOUR TRAFFIC VOLUMES ROUNDED TO THE NEAREST 5 VEHICLES

- STUDY INTERSECTION

* - NEGLIGIBLE VOLUME

N
Not to scale

APPENDIX J-2
CUMULATIVE (2020) CONDITIONS WITH PIPELINE PROJECTS
TRAFFIC VOLUMES

RAJU Associates, Inc.

AM PEAK HOUR
LEVEL OF SERVICE WORKSHEETS

CPIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:49:20 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA / OCEAN AVE W/E: WASHINGTON BLVD I/S No: 1

AM/PM: AM Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	417	435	398	67	156	22	133	398	47	52	622	262
AMBIENT												
RELATED												
PROJECT												
TOTAL	417	435	398	67	156	22	133	398	47	52	622	262

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 1 0 0 1 0	1 0 0 0 1 0 0	1 0 1 0 1 0 0	1 0 2 0 0 1 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Split	Auto	Split	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 178 B: 67

EastBound A: 311 B: 52

WestBound A: 223 B: 133

NorthBound A: 435 B: 229

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C $\frac{435 \quad 178 \quad 133 \quad 311}{1425}$ 0.672 LOS B

Developed by Chun Wong, 12/94

CPIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:49:20 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: ADMIRALTY WY I/S No: 2

AM/PM: AM Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	581	930	430	229	0	413	0	777	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	581	930	430	229	0	413	0	777	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 2 0 0 1 0	1 0 3 0 0 0 0	2 0 0 0 0 2 0	0 0 0 0 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Free	Prot-Fix	none	Split	OLA	none	none

Critical Movements Diagram

SouthBound A: 76 B: 430

EastBound A: 0 B: 0

WestBound A: 0 B: 227

NorthBound A: 291 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C $\frac{291 \quad 430 \quad 227 \quad 0}{1425}$ 0.595 LOS A

Developed by Chun Wong, 12/94

CPIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:49:20 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: PANAY WY I/S No: 3

AM/PM: AM Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	1139	23	124	440	25	20	0	181	127	1	2
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	1139	23	124	440	25	20	0	181	127	1	2

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	0 1 0 0 0 1 0	0 0 0 1 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 155 B: 124

EastBound A: 130 B: 127

WestBound A: 181 B: 20

NorthBound A: 387 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C 387 124 181 127 / 1500 0.476 LOS A

Developed by Chun Wong, 12 94

CPIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:49:20 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: MARQUESAS WY I/S No: 4

AM/PM: AM Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	43	767	7	99	308	59	3	24	253	121	12	13
AMBIENT												
RELATED												
PROJECT												
TOTAL	43	767	7	99	308	59	3	24	253	121	12	13

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 0 1 0	0 1 0 0 1 0 0	1 0 1 0 0 1 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 154 B: 99

EastBound A: 13 B: 121

WestBound A: 253 B: 3

NorthBound A: 258 B: 43

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C 258 99 253 121 / 1500 0.417 LOS A

Developed by Chun Wong, 12 94

CPIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:49:20 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA | W/E: TAHITI WY | I/S No: 5

AM/PM: AM | Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	6	641	5	87	219	12	20	2	162	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	6	641	5	87	219	12	20	2	162	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 1 0 0	1 0 1 0 1 0 0	0 1 0 0 1 0 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Split	Auto	□none□	□none□

Critical Movements Diagram

SouthBound A: 116 B: 87

EastBound A: 0 B: 0

WestBound A: 162 B: 20

NorthBound A: 326 B: 6

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (326 □ 87 □ 162 □ 0) / □1500 □ 0.313 LOS □ A

Developed by Chun Wong, 12.94

CPIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:49:20 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA | W/E: BORA BORA WY | I/S No: 6

AM/PM: AM | Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	5	411	10	61	179	10	6	1	165	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	5	411	10	61	179	10	6	1	165	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 1 0 0	1 0 1 0 1 0 0	0 0 0 1 0 0 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	□none□	□none□

Critical Movements Diagram

SouthBound A: 95 B: 61

EastBound A: 0 B: 0

WestBound A: 172 B: 6

NorthBound A: 213 B: 5

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (213 □ 61 □ 172 □ 0) / 1200 □ 0.372 LOS □ A

Developed by Chun Wong, 12.94

CPIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:49:20 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY | W/E: ADMIRALTY WY | I/S No: 7

AM/PM: AM | Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	TH	RT	SOUTHBOUND LT	TH	RT	WESTBOUND LT	TH	RT	EASTBOUND LT	TH	RT
EXISTING	47	96	117	148	47	82	56	933	75	88	1136	22
AMBIENT												
RELATED												
PROJECT												
TOTAL	47	96	117	148	47	82	56	933	75	88	1136	22

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	1 0 0 0 1 0 0	1 0 1 0 0 1 0	1 0 1 0 1 0 0	1 0 1 0 1 0 0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 82 B: 148

EastBound A: 579 B: 88

WestBound A: 504 B: 56

NorthBound A: 213 B: 47

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (213 □ 148 □ 56 □ 579) / □1500 □ 0.594 LOS □ A

Developed by Chun Wong, 12/94

CPIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:49:20 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD | W/E: WASHINGTON BLVD | I/S No: 8

AM/PM: AM | Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	TH	RT	SOUTHBOUND LT	TH	RT	WESTBOUND LT	TH	RT	EASTBOUND LT	TH	RT
EXISTING	552	1945	261	290	1499	142	195	616	262	184	865	475
AMBIENT												
RELATED												
PROJECT												
TOTAL	552	1945	261	290	1499	142	195	616	262	184	865	475

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	2 0 2 0 1 0 0	2 0 2 0 1 0 0	2 0 2 0 0 1 0	2 0 2 0 0 1 0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	OLA

Critical Movements Diagram

SouthBound A: 547 B: 160

EastBound A: 433 B: 101

WestBound A: 308 B: 107

NorthBound A: 735 B: 304

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (735 □ 160 □ 107 □ 433) / □1375 □ 0.974 LOS □ E

Developed by Chun Wong, 12/94

CPIPEAM

CalcaDB

April 21, 2010 ,Wednesday 01:11:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: SR-90 ON/OFF RAMPS I/S No: 9

AM/PM: AM Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	2137	175	993	1719	0	147	0	840	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	2137	175	993	1719	0	147	0	840	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 2 0 1 0 0	2 0 3 0 0 0 0	2 0 0 0 0 2 0	0 0 0 0 0 0 0
SIGNAL Phasing	Perm	Prot-Fix	Split	none
SIGNAL RTOR	Auto	none	OLA	none

Critical Movements Diagram

	A	B
SouthBound	573	546
EastBound	0	0
WestBound	0	81
NorthBound	771	0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

$$V/C = \frac{771 \quad 546 \quad 81 \quad 0}{1425} \quad 0.911$$

LOS E

Developed by Chun Wong, 12/94

CPIPEAM

CalcaDB

April 21, 2010 ,Wednesday 01:11:16 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: BALI WY I/S No: 10

AM/PM: AM Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	24	954	64	168	1316	19	30	24	251	11	37	13
AMBIENT									-168			
RELATED												
PROJECT												
TOTAL	24	954	64	168	1316	19	30	24	83	11	37	13

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	1 0 1 0 1 0 0	1 0 0 0 1 1 0	0 1 0 0 1 0 0
SIGNAL Phasing	Prot-Fix	Prot-Fix	Perm	Perm
SIGNAL RTOR	Auto	Auto	OLA	Auto

Critical Movements Diagram

	A	B
SouthBound	668	168
EastBound	31	11
WestBound	54	30
NorthBound	509	24

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) B(E/B)

$$V/C = \frac{24 \quad 668 \quad 54 \quad 11}{1425} \quad 0.461$$

LOS A

Developed by Chun Wong, 12/94

CPIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:49:20 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD | W/E: BALI WY | I/S No: 11

AM/PM: AM | Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	120	2020	33	28	1651	191	3	0	14	208	2	57
AMBIENT												
RELATED												
PROJECT												
TOTAL	120	2020	33	28	1651	191	3	0	14	208	2	57

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	0 0 0 1 0 0 0	1 1 0 0 0 1 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	Auto	Split	Auto

Critical Movements Diagram

	A:	B:
SouthBound	614	28
EastBound	105	105
WestBound	17	3
NorthBound	684	120

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (120 □ 614 □ 17 □ 105) / □1375 □ 0.553 LOS □ A

Developed by Chun Wong, 12.94

CPIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:49:20 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY | W/E: MINDANAO WY | I/S No: 12

AM/PM: AM | Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	29	645	52	511	734	51	151	98	490	74	87	27
AMBIENT												
RELATED												
PROJECT												
TOTAL	29	645	52	511	734	51	151	98	490	74	87	27

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	1 0 1 0 1 0 0	1 1 0 0 0 1 0	1 0 0 0 1 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	OLA	Split	Auto

Critical Movements Diagram

	A:	B:
SouthBound	393	511
EastBound	114	74
WestBound	125	125
NorthBound	349	29

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (349 □ 511 □ 125 □ 114) / □1375 □ 0.729 LOS □ C

Developed by Chun Wong, 12.94

CPIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:49:20 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: MINDANAO WY I/S No: 13

AM/PM: AM Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	144	2030	331	92	1430	77	214	519	100	0	707	76
AMBIENT												
RELATED												
PROJECT												
TOTAL	144	2030	331	92	1430	77	214	519	100	0	707	76

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 3 0 0 1 0	1 0 2 0 1 0 0	2 0 1 0 1 0 0	0 0 1 0 1 0 0
SIGNAL Phasing	Prot-Fix	Prot-Fix	Prot-Fix	Perm
SIGNAL RTOR	OLA	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	502	92
EastBound	392	0
WestBound	310	118
NorthBound	677	144

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (677 + 92 + 118 + 392) / 1375 = 0.860 LOS D

Developed by Chun Wong, 12 94

CPIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:49:20 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: FIJI WY I/S No: 14

AM/PM: AM Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	0	686	0	119	0	112	606	75	155	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	686	0	119	0	112	606	75	155	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 0 0 0 0	2 0 0 0 0 1 0	0 0 1 0 0 1 0	1 0 2 0 0 0 0
SIGNAL Phasing	none	Split	Perm	Perm
SIGNAL RTOR	none	Free	Free	none

Critical Movements Diagram

	A	B
SouthBound	0	377
EastBound	78	75
WestBound	112	0
NorthBound	0	0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (0 + 377 + 112 + 75) / 1500 = 0.306 LOS A

Developed by Chun Wong, 12 94

CPIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:49:20 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: FIJI WY I/S No: 15

AM/PM: AM Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	621	2119	35	41	1642	67	16	14	41	130	17	692
AMBIENT												
RELATED												
PROJECT												
TOTAL	621	2119	35	41	1642	67	16	14	41	130	17	692

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	2 0 2 0 1 0 0	1 0 2 0 1 0 0	0 0 0 1 0 0 0	1 0 1 0 0 1 0

SIGNAL	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Free

Critical Movements Diagram

SouthBound A: 570 B: 41

EastBound A: 17 B: 130

WestBound A: 71 B: 16

NorthBound A: 718 B: 342

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (342 + 570 + 71 + 130) / 1425 = 0.711 LOS C

Developed by Chun Wong, 12:94

CPIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:49:20 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 EB ON/OFF RAMPS I/S No: 16

AM/PM: AM Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	374	854	492	897	0	0	0	0	26	1129	13
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	374	854	492	897	0	0	0	0	26	1129	13

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	0 0 1 0 1 1 0	2 0 2 0 0 0 0	0 0 0 0 0 0 0	1 0 1 0 1 0 0

SIGNAL	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
	Perm	Auto	Prot-Fix	none	none	none	Split	Auto

Critical Movements Diagram

SouthBound A: 449 B: 271

EastBound A: 571 B: 26

WestBound A: 0 B: 0

NorthBound A: 470 B: 0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (470 + 271 + 0 + 571) / 1425 = 0.851 LOS D

Developed by Chun Wong, 12:94

CPIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:49:20 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 WB ON/OFF RAMPS I/S No: 17

AM/PM: AM Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	12	389	0	0	753	26	636	947	460	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	12	389	0	0	753	26	636	947	460	0	0	0

LANE	NB	SB	WB	EB
	1 0 2 0 0 0 0	0 0 2 0 1 0 0	1 1 1 0 0 1 0	0 0 0 0 0 0 0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Prot-Fix	none	Perm	Auto	Split	Auto	none	none

Critical Movements Diagram

SouthBound A: 260 B: 0

EastBound A: 0 B: 0

WestBound A: 528 B: 528

NorthBound A: 195 B: 12

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) A(E/B)

$$V/C = \frac{12 + 260 + 528 - 0}{1425} = 0.491 \quad LOS\ A$$

Developed by Chun Wong, 12/94

CPIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:49:20 PM

INTERSECTION DATA SUMMARY SHEET

N/S: CULVER BLVD W/E: JEFFERSON BLVD I/S No: 18

AM/PM: AM Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	2491	783	30	408	0	507	0	4	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	2491	783	30	408	0	507	0	4	0	0	0

LANE	NB	SB	WB	EB
	0 0 2 0 0 1 0	0 1 1 0 0 0 0	2 0 0 0 0 1 0	0 0 0 0 0 0 0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Perm	Free	Perm	none	Split	Auto	none	none

Critical Movements Diagram

SouthBound A: 294 B: 30

EastBound A: 0 B: 0

WestBound A: 4 B: 279

NorthBound A: 1246 B: 0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

$$V/C = \frac{1246 + 30 + 279 - 0}{1500} = 0.967 \quad LOS\ E$$

Developed by Chun Wong, 12/94

CPIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:49:20 PM

INTERSECTION DATA SUMMARY SHEET

N/S:	LINCOLN BLVD	W/E:	JEFFERSON BLVD	I/S No:	19
AM/PM:	AM	Comments:	CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS		
COUNT DATE:		STUDY DATE:		GROWTH FACTOR:	

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	46	2082	773	468	1432	250	428	187	611	177	480	66
AMBIENT												
RELATED												
PROJECT												
TOTAL	46	2082	773	468	1432	250	428	187	611	177	480	66

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 4 0 0 1 0	2 0 3 0 1 0 0	2 0 2 0 0 2 0	1 0 2 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	Auto

Critical Movements Diagram

	A:	B:
SouthBound	421	257
EastBound	182	177
WestBound	94	235
NorthBound	538	46

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (538 257 235 182) / 1375 = 0.811 LOS D

Developed by Chun Wong, 12/94

CPIPEAM

CalcaDB

March 10, 2010 ,Wednesday 12:49:20 PM

INTERSECTION DATA SUMMARY SHEET

N/S:	PALAWAN WY	W/E:	WASHINGTON BLVD	I/S No:	20
AM/PM:	AM	Comments:	CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS		
COUNT DATE:		STUDY DATE:		GROWTH FACTOR:	

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	242	0	0	0	198	651	0	0	1045	78
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	242	0	0	0	198	651	0	0	1045	78

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 0 0 1 0	0 0 0 0 0 0 0	1 0 2 0 0 0 0	0 0 2 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	Auto	none	none	Perm	none	Perm	Auto

Critical Movements Diagram

	A:	B:
SouthBound	0	0
EastBound	523	0
WestBound	326	198
NorthBound	242	0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (242 0 198 523) / 1200 = 0.803 LOS D

Developed by Chun Wong, 12/94

PM PEAK HOUR
LEVEL OF SERVICE WORKSHEETS

CPIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:49:44 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA / OCEAN AVE W/E: WASHINGTON BLVD I/S No: 1

AM/PM: PM Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	505	315	261	119	534	34	174	622	50	33	610	455
AMBIENT												
RELATED												
PROJECT												
TOTAL	505	315	261	119	534	34	174	622	50	33	610	455

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	2	0	1	0	0	1	0	1	0	0	0	1	0	0	1	0	1	0	1	0	0	1	0	2	0	0	1	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Split	Auto	Split	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	568	119
EastBound	316	33
WestBound	336	174
NorthBound	315	278

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (315 + 568 + 174 + 316) / 1425 = 0.894 LOS D

Developed by Chun Wong, 12/94

CPIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:49:44 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: ADMIRALTY WY I/S No: 2

AM/PM: PM Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	360	692	744	419	0	1017	0	737	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	360	692	744	419	0	1017	0	737	0	0	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	0	2	0	0	1	0	1	0	3	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Free	Prot-Fix	none	Split	OLA	none	none

Critical Movements Diagram

	A	B
SouthBound	140	744
EastBound	0	0
WestBound	0	559
NorthBound	180	0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (180 + 744 + 559 + 0) / 1425 = 0.971 LOS E

Developed by Chun Wong, 12/94

CPIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:49:44 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: PANAY WY I/S No: 3

AM/PM: PM Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	1	704	27	210	978	53	15	2	151	53	1	1
AMBIENT												
RELATED												
PROJECT												
TOTAL	1	704	27	210	978	53	15	2	151	53	1	1

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	2	0	1	0	0	1	0	2	0	1	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 344 B: 210

EastBound A: 55 B: 53

WestBound A: 151 B: 15

NorthBound A: 244 B: 1

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (244 □ 210 □ 151 □ 53) / □1500 □ 0.369 LOS □ A

Developed by Chun Wong, 12:94

CPIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:49:44 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: MARQUESAS WY I/S No: 4

AM/PM: PM Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	16	500	12	179	629	95	5	7	119	120	23	38
AMBIENT												
RELATED												
PROJECT												
TOTAL	16	500	12	179	629	95	5	7	119	120	23	38

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	2	0	1	0	0	1	0	2	0	0	1	0	0	1	0	0	1	0	0	1	0	1	0	0	1	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 315 B: 179

EastBound A: 38 B: 120

WestBound A: 119 B: 5

NorthBound A: 171 B: 16

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (171 □ 179 □ 119 □ 120) / □1500 □ 0.323 LOS □ A

Developed by Chun Wong, 12:94

CPIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:49:44 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: TAHITI WY I/S No: 5

AM/PM: PM Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	2	395	12	131	520	25	6	0	90	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	2	395	12	131	520	25	6	0	90	0	0	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	1	0	0	1	0	0	1	0	1	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Split	Auto	none	none

Critical Movements Diagram

SouthBound A: 273 B: 131

EastBound A: 0 B: 0

WestBound A: 90 B: 6

NorthBound A: 206 B: 2

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (206 + 131 + 90 + 0) / 1500 = 0.215 LOS A

Developed by Chun Wong, 12/94

CPIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:49:44 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: BORA BORA WY I/S No: 6

AM/PM: PM Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	3	305	5	160	372	20	1	0	92	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	3	305	5	160	372	20	1	0	92	0	0	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	1	0	0	1	0	0	1	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	none	none

Critical Movements Diagram

SouthBound A: 196 B: 160

EastBound A: 0 B: 0

WestBound A: 93 B: 1

NorthBound A: 158 B: 3

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (158 + 160 + 93 + 0) / 1200 = 0.343 LOS A

Developed by Chun Wong, 12/94

CPIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:49:44 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: ADMIRALTY WY I/S No: 7

AM/PM: PM Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	59	89	123	344	176	196	189	1493	131	75	1289	47
AMBIENT												
RELATED												
PROJECT												
TOTAL	59	89	123	344	176	196	189	1493	131	75	1289	47

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	0	0	1	0	0	1	0	1	0	0	1	0	1	0	1	0	1	0	0	1	0	1	0	1	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 196 B: 344

EastBound A: 668 B: 75

WestBound A: 812 B: 189

NorthBound A: 212 B: 59

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (212 □ 344 □ 812 □ 75) / □1500 □ 0.892 LOS □ D

Developed by Chun Wong, 12.94

CPIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:49:44 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: WASHINGTON BLVD I/S No: 8

AM/PM: PM Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	558	1935	341	323	1795	210	346	927	398	153	780	572
AMBIENT												
RELATED												
PROJECT												
TOTAL	558	1935	341	323	1795	210	346	927	398	153	780	572

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	2	0	2	0	1	0	0	2	0	2	0	1	0	0	2	0	2	0	0	1	0	2	0	2	0	0	1	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	OLA

Critical Movements Diagram

SouthBound A: 668 B: 178

EastBound A: 390 B: 84

WestBound A: 464 B: 190

NorthBound A: 759 B: 307

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (307 □ 668 □ 190 □ 390) / □1375 □ 1.061 LOS □ F

Developed by Chun Wong, 12.94

CPIPEPM

CalcaDB

April 21, 2010 ,Wednesday 01:11:42 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD   W/E: SR-90 ON/OFF RAMPS   I/S No: 9

AM/PM: PM   Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	2120	211	904	2075	0	164	0	1129	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	2120	211	904	2075	0	164	0	1129	0	0	0

	NB							SB							WB							EB						
LANE	0	0	2	0	1	0	0	2	0	3	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Prot-Fix	□none□	Split	OLA	□none□	□none□

Critical Movements Diagram

SouthBound A: 692 B: 497

EastBound A: 0 B: 0

WestBound A: 124 B: 90

NorthBound A: 777 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (777 □ 497 □ 124 □ 0) / □1425 □ 0.911   LOS □ E

Developed by Chun Wong, 12.94

CPIPEPM

CalcaDB

April 21, 2010 ,Wednesday 01:11:42 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY   W/E: BALI WY   I/S No: 10

AM/PM: PM   Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	22	1350	200	188	1432	17	70	27	368	19	37	32
AMBIENT									-188			
RELATED												
PROJECT												
TOTAL	22	1350	200	188	1432	17	70	27	180	19	37	32

	NB							SB							WB							EB						
LANE	1	0	1	0	1	0	0	1	0	1	0	1	0	0	1	0	0	0	1	1	0	0	1	0	0	1	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	OLA	Perm	Auto

Critical Movements Diagram

SouthBound A: 725 B: 188

EastBound A: 44 B: 19

WestBound A: 104 B: 70

NorthBound A: 775 B: 22

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (775 □ 188 □ 104 □ 19) / □1425 □ 0.692   LOS □ B

Developed by Chun Wong, 12.94

CPIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:49:44 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: BALI WY I/S No: 11

AM/PM: PM Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	130	2040	20	6	1916	324	12	0	31	349	3	77
AMBIENT												
RELATED												
PROJECT												
TOTAL	130	2040	20	6	1916	324	12	0	31	349	3	77

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	2	0	1	0	0	1	0	2	0	1	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	Auto	Split	Auto

Critical Movements Diagram

SouthBound A: 747 B: 6

EastBound A: 176 B: 176

WestBound A: 43 B: 12

NorthBound A: 687 B: 130

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ $\frac{130 \;□\; 747 \;□\; 43 \;□\; 176}{□1375}$ □ 0.727 LOS □ C

Developed by Chun Wong, 12:94

CPIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:49:44 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: MINDANAO WY I/S No: 12

AM/PM: PM Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	43	996	64	428	1151	109	321	223	603	154	136	35
AMBIENT												
RELATED												
PROJECT												
TOTAL	43	996	64	428	1151	109	321	223	603	154	136	35

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	1	0	1	0	0	1	0	1	0	1	0	0	1	1	0	0	0	1	0	1	0	0	0	1	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	OLA	Split	Auto

Critical Movements Diagram

SouthBound A: 630 B: 428

EastBound A: 171 B: 154

WestBound A: 272 B: 272

NorthBound A: 530 B: 43

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ $\frac{530 \;□\; 428 \;□\; 272 \;□\; 171}{□1375}$ □ 0.949 LOS □ E

Developed by Chun Wong, 12:94

CPIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:49:44 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: MINDANAO WY I/S No: 13

AM/PM: PM Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	146	2024	314	203	1837	110	411	793	94	0	657	165
AMBIENT												
RELATED												
PROJECT												
TOTAL	146	2024	314	203	1837	110	411	793	94	0	657	165

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 3 0 0 1 0	1 0 2 0 1 0 0	2 0 1 0 1 0 0	0 0 1 0 1 0 0
SIGNAL Phasing	Prot-Fix	Prot-Fix	Prot-Fix	Perm
SIGNAL RTOR	OLA	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	649	203
EastBound	411	0
WestBound	444	226
NorthBound	675	146

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (675 + 203 + 226 + 411) / 1375 = 1.032 LOS F

Developed by Chun Wong, 12.94

CPIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:49:44 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: FIJI WY I/S No: 14

AM/PM: PM Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	0	959	0	137	0	239	574	81	305	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	959	0	137	0	239	574	81	305	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 0 0 0 0	2 0 0 0 0 1 0	0 0 1 0 0 1 0	1 0 2 0 0 0
SIGNAL Phasing	none	Split	Perm	Perm
SIGNAL RTOR	none	Free	Free	none

Critical Movements Diagram

	A	B
SouthBound	0	527
EastBound	153	81
WestBound	239	0
NorthBound	0	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (0 + 527 + 239 + 81) / 1500 = 0.495 LOS A

Developed by Chun Wong, 12.94

CPIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:49:44 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: FIJI WY I/S No: 15

AM/PM: PM Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	863	2281	24	92	2281	119	42	23	40	137	8	1116
AMBIENT												
RELATED												
PROJECT												
TOTAL	863	2281	24	92	2281	119	42	23	40	137	8	1116

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 2 0 1 0 0	1 0 2 0 1 0 0	0 0 0 1 0 0 0	1 0 1 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Free

Critical Movements Diagram

	A	B
SouthBound	800	92
EastBound	8	137
WestBound	105	42
NorthBound	768	475

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (475 + 800 + 105 + 137) / 1425 = 0.995 LOS = E

Developed by Chun Wong, 12/94

CPIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:49:44 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 EB ON/OFF RAMPS I/S No: 16

AM/PM: PM Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	523	746	817	1165	0	0	0	0	12	1059	41
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	523	746	817	1165	0	0	0	0	12	1059	41

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 1 0 1 1 0	2 0 2 0 0 0 0	0 0 0 0 0 0 0	1 0 1 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Prot-Fix	none	none	none	Split	Auto

Critical Movements Diagram

	A	B
SouthBound	583	449
EastBound	550	12
WestBound	0	0
NorthBound	423	0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (423 + 449 + 0 + 550) / 1425 = 0.928 LOS = E

Developed by Chun Wong, 12/94

CPIPEPM

March 10, 2010 ,Wednesday 12:49:44 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 WB ON/OFF RAMPS I/S No: 17

AM/PM: PM Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	18	518	0	0	1218	91	770	1207	525	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	18	518	0	0	1218	91	770	1207	525	0	0	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	2	0	0	0	0	0	0	2	0	1	0	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	none	Perm	Auto	Split	Auto	none	none

Critical Movements Diagram

	A:	B:
SouthBound	436	0
EastBound	0	0
WestBound	659	659
NorthBound	259	18

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C 18 436 659 0 / 1425 0.711 LOS C

Developed by Chun Wong, 12.94

CPIPEPM

March 10, 2010 ,Wednesday 12:49:44 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: CULVER BLVD W/E: JEFFERSON BLVD I/S No: 18

AM/PM: PM Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	947	371	65	1417	0	1516	0	3	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	947	371	65	1417	0	1516	0	3	0	0	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	0	2	0	0	1	0	0	1	1	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Free	Perm	none	Split	Auto	none	none

Critical Movements Diagram

	A:	B:
SouthBound	904	65
EastBound	0	0
WestBound	3	834
NorthBound	474	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C 0 904 834 0 / 1500 1.089 LOS F

Developed by Chun Wong, 12.94

CPIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:49:44 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: JEFFERSON BLVD I/S No: 19

AM/PM: PM Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	66	1917	346	650	1918	828	666	624	809	64	299	66
AMBIENT												
RELATED												
PROJECT												
TOTAL	66	1917	346	650	1918	828	666	624	809	64	299	66

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	4	0	0	1	0	2	0	3	0	1	0	0	2	0	2	0	0	2	0	1	0	2	0	1	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	Auto

Critical Movements Diagram

SouthBound A: 828 B: 358

EastBound A: 122 B: 64

WestBound A: 312 B: 366

NorthBound A: 479 B: 66

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (66 □ 828 □ 366 □ 122) / □1375 □ 0.935 LOS □ E

Developed by Chun Wong, 12.94

CPIPEPM

CalcaDB

March 10, 2010 ,Wednesday 12:49:44 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: WASHINGTON BLVD I/S No: 20

AM/PM: PM Comments: CUMULATIVE (2020) WITH LCP PIPELINE PROJECTS

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	212	0	0	0	451	837	0	0	832	135
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	212	0	0	0	451	837	0	0	832	135

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	2	0	0	1	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	Auto	□none□	□none□	Perm	□none□	Perm	Auto

Critical Movements Diagram

SouthBound A: 0 B: 0

EastBound A: 416 B: 0

WestBound A: 419 B: 451

NorthBound A: 212 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ A(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

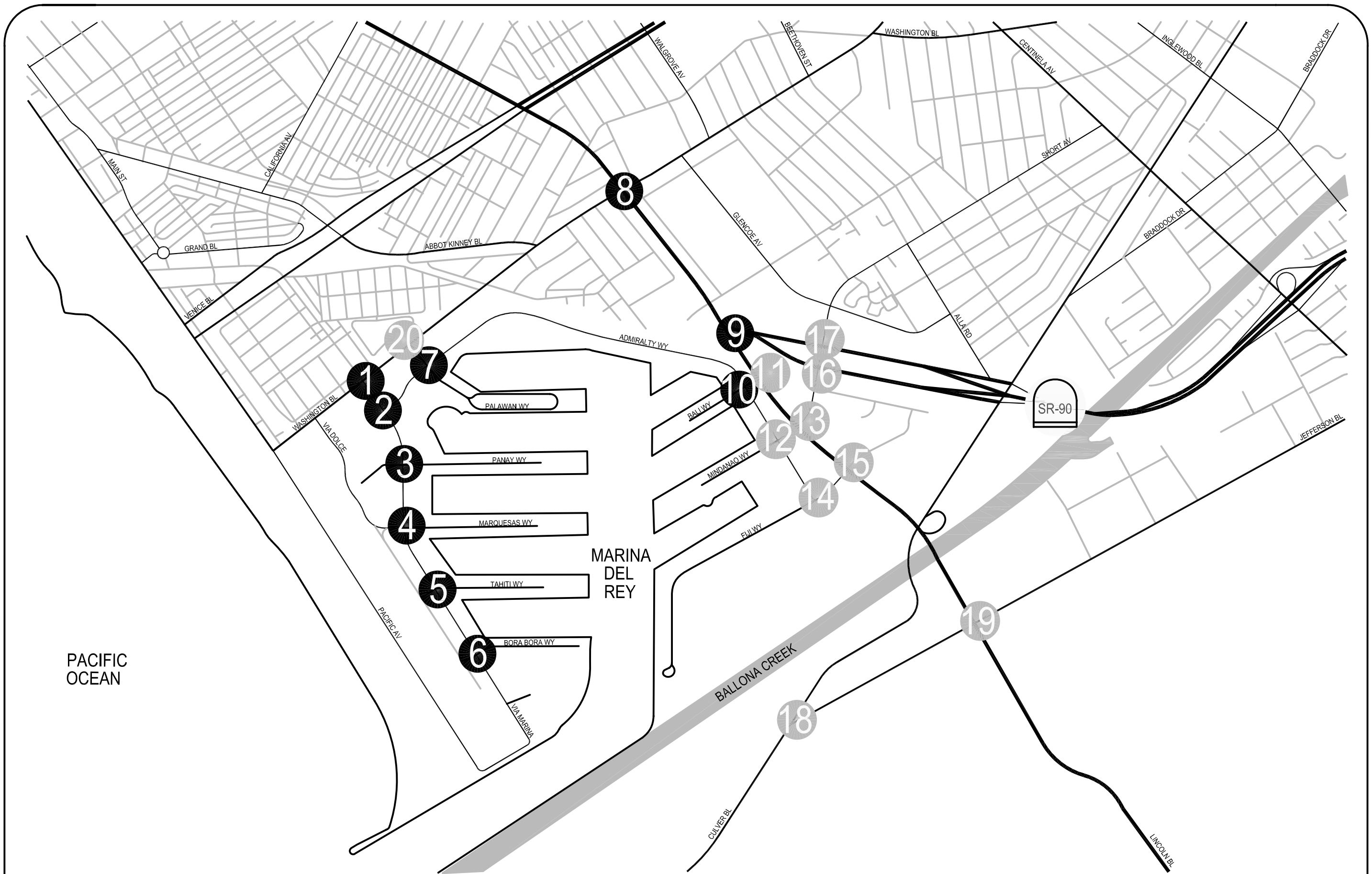
V/C □ (212 □ 0 □ 451 □ 416) / 1200 □ 0.899 LOS □ D

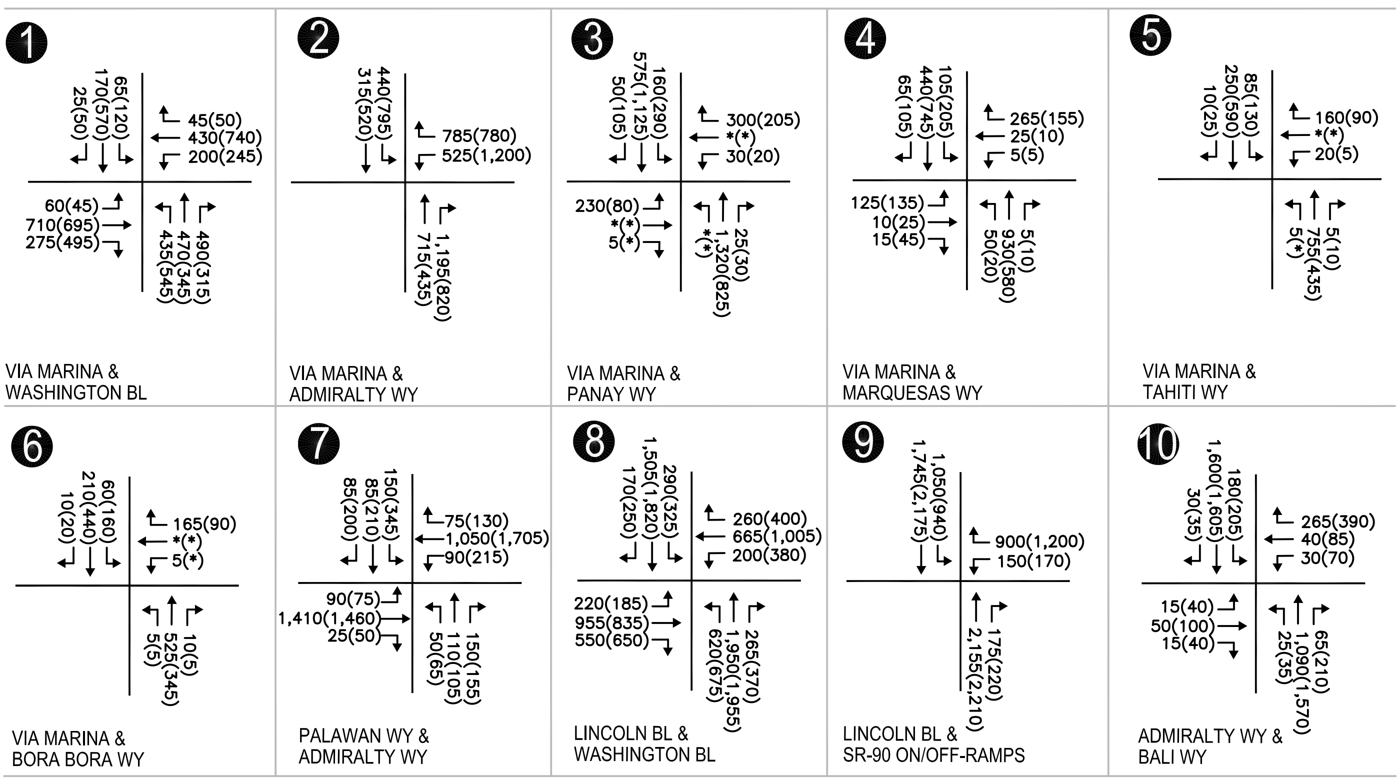
Developed by Chun Wong, 12.94

APPENDIX K

Cumulative (2020) Conditions with Proposed LCP Buildout (including Pipeline Projects) Traffic Volumes and Level of Service Worksheets

All signalized intersections include V/C credit of 0.10 to account from ATSAC and ATCS. ATCS credit of 0.03 is not automatically reflected on the capacity calculation worksheets.





LEGEND:

XXX(XXX) - AM(PM) PEAK HOUR TRAFFIC VOLUMES ROUNDED TO THE NEAREST 5 VEHICLES

- STUDY INTERSECTION

* - NEGLIGIBLE VOLUME

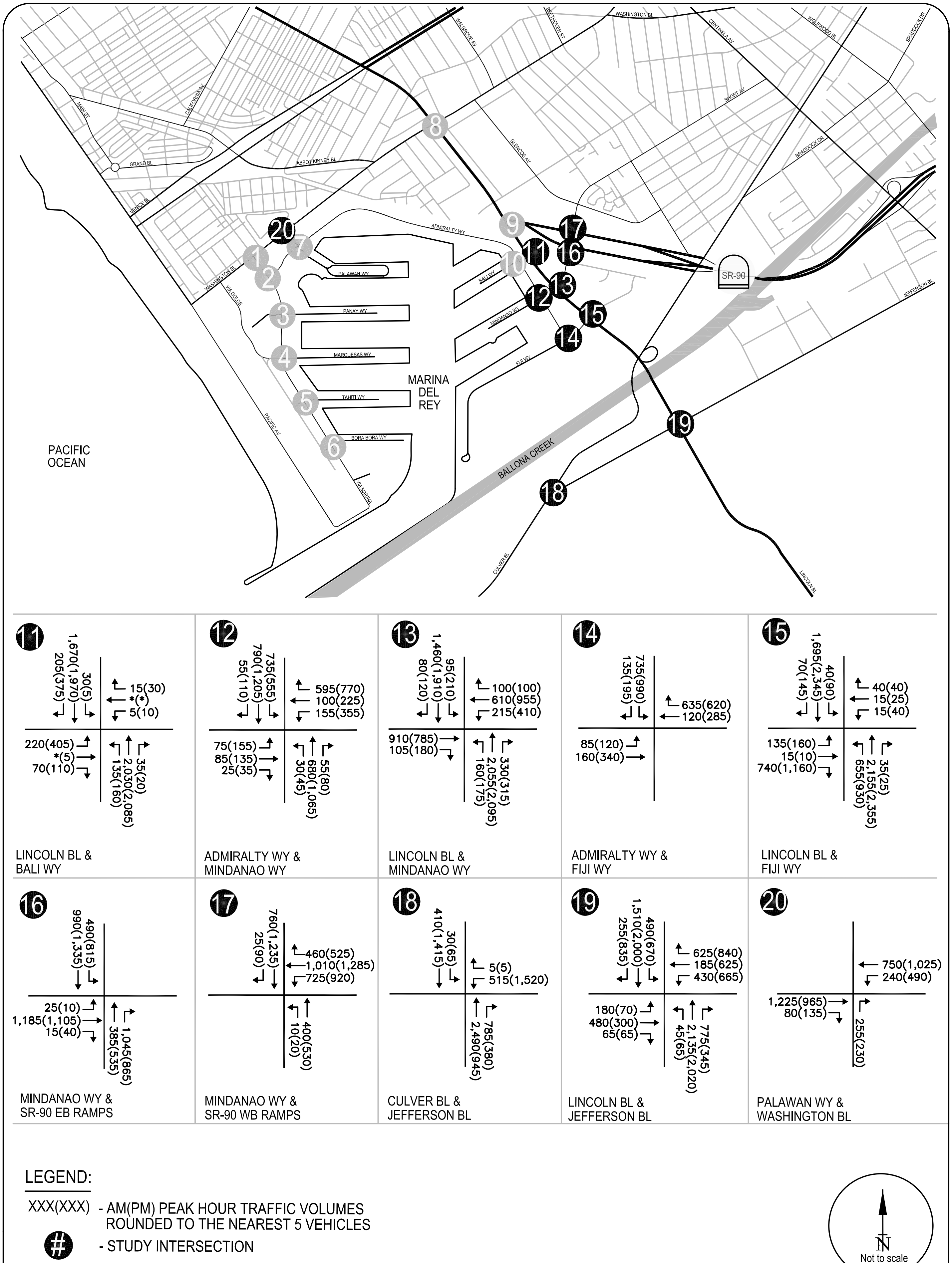
N

Not to scale

APPENDIX K-1

CUMULATIVE (2020) CONDITIONS WITH PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS) TRAFFIC VOLUMES

RAJU Associates, Inc.



APPENDIX K-2
CUMULATIVE (2020) CONDITIONS WITH PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS) TRAFFIC VOLUMES

RAJU Associates, Inc.

AM PEAK HOUR
LEVEL OF SERVICE WORKSHEETS

CPROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:50:35 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA / OCEAN AVE W/E: WASHINGTON BLVD I/S No: 1

AM/PM: AM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	433	470	491	67	171	26	200	431	47	60	712	275
AMBIENT												
RELATED												
PROJECT												
TOTAL	433	470	491	67	171	26	200	431	47	60	712	275

	NB	SB	WB	EB
LANE	2 0 1 0 0 1 0	1 0 0 0 1 0 0	1 0 1 0 1 0 0	1 0 2 0 0 1 0
SIGNAL Phasing	Split	Split	Perm	Perm
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	197	67
EastBound	356	60
WestBound	239	200
NorthBound	491	238

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (491 + 197 + 200 + 356) / 1425 = 0.803 LOS D

Developed by Chun Wong, 12 94

CPROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:50:35 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: ADMIRALTY WY I/S No: 2

AM/PM: AM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	716	1193	441	313	0	525	0	787	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	716	1193	441	313	0	525	0	787	0	0	0

	NB	SB	WB	EB
LANE	0 0 2 0 0 1 0	1 0 3 0 0 0 0	2 0 0 0 0 2 0	0 0 0 0 0 0 0
SIGNAL Phasing	Perm	Prot-Fix	Split	none
SIGNAL RTOR	Free	none	OLA	none

Critical Movements Diagram

	A	B
SouthBound	104	441
EastBound	0	0
WestBound	0	289
NorthBound	358	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (358 + 441 + 289 + 0) / 1425 = 0.694 LOS B

Developed by Chun Wong, 12 94

CPROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:50:35 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: PANAY WY I/S No: 3

AM/PM: AM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	1	1318	25	159	575	51	28	0	298	230	1	4
AMBIENT												
RELATED												
PROJECT												
TOTAL	1	1318	25	159	575	51	28	0	298	230	1	4

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	0 1 0 0 0 1 0	0 0 0 1 0 0 0
SIGNAL Phasing	Perm	Perm	Perm	Perm
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	209	159
EastBound	235	230
WestBound	298	28
NorthBound	448	1

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C $= \frac{448 + 159 + 298 + 230}{1500} = 0.687$ LOS B

Developed by Chun Wong, 12/94

CPROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:50:35 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: MARQUESAS WY I/S No: 4

AM/PM: AM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	49	930	7	107	438	67	3	24	267	125	12	15
AMBIENT												
RELATED												
PROJECT												
TOTAL	49	930	7	107	438	67	3	24	267	125	12	15

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 0 1 0	0 1 0 0 1 0 0	1 0 1 0 0 1 0
SIGNAL Phasing	Perm	Perm	Perm	Perm
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	219	107
EastBound	15	125
WestBound	267	3
NorthBound	312	49

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C $= \frac{312 + 107 + 267 + 125}{1500} = 0.471$ LOS A

Developed by Chun Wong, 12/94

CPROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:50:35 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: TAHITI WY I/S No: 5

AM/PM: AM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	6	757	5	87	252	12	20	2	162	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	6	757	5	87	252	12	20	2	162	0	0	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	1	0	0	1	0	0	1	0	1	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Split	Auto	none	none

Critical Movements Diagram

SouthBound A: 132 B: 87

EastBound A: 0 B: 0

WestBound A: 162 B: 20

NorthBound A: 384 B: 6

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C $\frac{384 \quad 87 \quad 162 \quad 0}{1500}$ 0.352 LOS A

Developed by Chun Wong, 12.94

CPROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:50:35 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: BORA BORA WY I/S No: 6

AM/PM: AM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	5	527	10	61	212	10	6	1	165	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	5	527	10	61	212	10	6	1	165	0	0	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	1	0	0	1	0	0	1	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	none	none

Critical Movements Diagram

SouthBound A: 111 B: 61

EastBound A: 0 B: 0

WestBound A: 172 B: 6

NorthBound A: 271 B: 5

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C $\frac{271 \quad 61 \quad 172 \quad 0}{1200}$ 0.420 LOS A

Developed by Chun Wong, 12.94

CPROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:50:35 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: ADMIRALTY WY I/S No: 7

AM/PM: AM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	50	109	152	148	87	85	91	1048	75	88	1408	23
AMBIENT												
RELATED												
PROJECT												
TOTAL	50	109	152	148	87	85	91	1048	75	88	1408	23

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 0 0 1 0 0	1 0 1 0 0 1 0	1 0 1 0 1 0 0	1 0 1 0 1 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	87	148
EastBound	716	88
WestBound	562	91
NorthBound	261	50

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (261 + 148 + 91 + 716) / 1500 = 0.741 LOS C

Developed by Chun Wong, 12.94

CPROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:50:35 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: WASHINGTON BLVD I/S No: 8

AM/PM: AM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	621	1949	266	290	1504	169	202	665	262	221	954	548
AMBIENT												
RELATED												
PROJECT												
TOTAL	621	1949	266	290	1504	169	202	665	262	221	954	548

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 2 0 1 0 0	2 0 2 0 1 0 0	2 0 2 0 0 1 0	2 0 2 0 0 1 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	OLA

Critical Movements Diagram

	A	B
SouthBound	558	160
EastBound	477	122
WestBound	333	111
NorthBound	738	342

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (342 + 558 + 111 + 477) / 1375 = 1.012 LOS F

Developed by Chun Wong, 12.94

CPROJAM

CalcaDB

April 21, 2010 ,Wednesday 01:12:52 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: SR-90 ON/OFF RAMPS I/S No: 9

AM/PM: AM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	2157	176	1049	1747	0	149	0	899	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	2157	176	1049	1747	0	149	0	899	0	0	0

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	0 0 2 0 1 0 0	2 0 3 0 0 0 0	2 0 0 0 0 2 0	0 0 0 0 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Prot-Fix	none	Split	OLA	none	none

Critical Movements Diagram

SouthBound A: 582 B: 577

EastBound A: 0 B: 0

WestBound A: 0 B: 82

NorthBound A: 778 B: 0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C $= \frac{778 + 577 + 82 + 0}{1425} = 0.938$ LOS E

Developed by Chun Wong, 12.94

CPROJAM

CalcaDB

April 21, 2010 ,Wednesday 01:12:52 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: BALI WY I/S No: 10

AM/PM: AM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	27	1091	65	182	1601	28	30	40	263	15	48	15
AMBIENT									-182			
RELATED												
PROJECT												
TOTAL	27	1091	65	182	1601	28	30	40	81	15	48	15

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	1 0 1 0 1 0 0	1 0 1 0 1 0 0	1 0 0 0 1 1 0	0 1 0 0 1 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	OLA	Perm	Auto

Critical Movements Diagram

SouthBound A: 815 B: 182

EastBound A: 39 B: 15

WestBound A: 61 B: 30

NorthBound A: 578 B: 27

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C $= \frac{27 + 815 + 61 + 15}{1425} = 0.574$ LOS A

Developed by Chun Wong, 12.94

CPROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:50:35 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: BALI WY I/S No: 11

AM/PM: AM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	136	2030	33	28	1668	203	3	0	14	219	2	71
AMBIENT												
RELATED												
PROJECT												
TOTAL	136	2030	33	28	1668	203	3	0	14	219	2	71

LANE							
NORTHBOUND	1	0	2	0	1	0	0
SOUTHBOUND	1	0	2	0	1	0	0
WESTBOUND	0	0	0	1	0	0	0
EASTBOUND	1	1	0	0	0	1	0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Prot-Fix	Auto	Prot-Fix	Auto	Split	Auto	Split	Auto

Critical Movements Diagram

SouthBound A: 624 B: 28

EastBound A: 111 B: 111

WestBound A: 17 B: 3

NorthBound A: 688 B: 136

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (136 □ 624 □ 17 □ 111) / □1375 □ 0.576 LOS □ A

Developed by Chun Wong, 12/94

CPROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:50:35 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: MINDANAO WY I/S No: 12

AM/PM: AM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	29	680	55	737	790	55	157	98	595	75	87	27
AMBIENT												
RELATED												
PROJECT												
TOTAL	29	680	55	737	790	55	157	98	595	75	87	27

LANE							
NORTHBOUND	1	0	1	0	1	0	0
SOUTHBOUND	1	0	1	0	1	0	0
WESTBOUND	1	1	0	0	0	1	0
EASTBOUND	1	0	0	0	1	0	0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Prot-Fix	Auto	Prot-Fix	Auto	Split	OLA	Split	Auto

Critical Movements Diagram

SouthBound A: 423 B: 737

EastBound A: 114 B: 75

WestBound A: 128 B: 128

NorthBound A: 368 B: 29

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (368 □ 737 □ 128 □ 114) / □1375 □ 0.910 LOS □ E

Developed by Chun Wong, 12/94

CPROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:50:35 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: MINDANAO WY I/S No: 13

AM/PM: **AM** Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	160	2053	331	93	1459	78	214	611	102	0	908	104
AMBIENT												
RELATED												
PROJECT												
TOTAL	160	2053	331	93	1459	78	214	611	102	0	908	104

LANE	NB	SB	WB	EB
	1 0 3 0 0 1 0	1 0 2 0 1 0 0	2 0 1 0 1 0 0	0 0 1 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 512 B: 93

EastBound A: 506 B: 0

WestBound A: 357 B: 118

NorthBound A: 684 B: 160

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (684 + 93 + 118 + 506) / 1375 = 0.949 LOS E

Developed by Chun Wong, 12:94

CPROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:50:35 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: FIJI WY I/S No: 14

AM/PM: **AM** Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	0	734	0	134	0	120	636	83	161	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	734	0	134	0	120	636	83	161	0

LANE	NB	SB	WB	EB
	0 0 0 0 0 0 0	2 0 0 0 0 1 0	0 0 1 0 0 1 0	1 0 2 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	none	none	Split	Free	Perm	Free	Perm	none

Critical Movements Diagram

SouthBound A: 0 B: 404

EastBound A: 81 B: 83

WestBound A: 120 B: 0

NorthBound A: 0 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (0 + 404 + 120 + 83) / 1500 = 0.335 LOS A

Developed by Chun Wong, 12:94

CPROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:50:35 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: FIJI WY I/S No: 15

AM/PM: AM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	655	2155	35	41	1695	71	16	14	41	135	17	742
AMBIENT												
RELATED												
PROJECT												
TOTAL	655	2155	35	41	1695	71	16	14	41	135	17	742

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 2 0 1 0 0	1 0 2 0 1 0 0	0 0 0 1 0 0 0	1 0 1 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Free

Critical Movements Diagram

SouthBound A: 589 B: 41

EastBound A: 17 B: 135

WestBound A: 71 B: 16

NorthBound A: 730 B: 360

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (360 + 589 + 71 + 135) / 1425 = 0.741 LOS C

Developed by Chun Wong, 12.94

CPROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:50:35 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 EB ON/OFF RAMPS I/S No: 16

AM/PM: AM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	385	1045	492	991	0	0	0	0	26	1186	13
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	385	1045	492	991	0	0	0	0	26	1186	13

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 1 0 1 1 0	2 0 2 0 0 0 0	0 0 0 0 0 0 0	1 0 1 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Prot-Fix	none	none	none	Split	Auto

Critical Movements Diagram

SouthBound A: 496 B: 271

EastBound A: 600 B: 26

WestBound A: 0 B: 0

NorthBound A: 575 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (575 + 271 + 0 + 600) / 1425 = 0.945 LOS E

Developed by Chun Wong, 12.94

CPROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:50:35 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY | W/E: SR-90 WB ON/OFF RAMPS | I/S No: 17

AM/PM: AM | Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	12	400	0	0	758	26	725	1008	460	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	12	400	0	0	758	26	725	1008	460	0	0	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	2	0	0	0	0	0	0	2	0	1	0	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	none	Perm	Auto	Split	Auto	none	none

Critical Movements Diagram

SouthBound A: 261 B: 0

EastBound A: 0 B: 0

WestBound A: 578 B: 578

NorthBound A: 200 B: 12

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (12 + 261 + 578 + 0) / 1425 = 0.527 LOS = A

Developed by Chun Wong, 12/94

CPROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:50:35 PM

INTERSECTION DATA SUMMARY SHEET

N/S: CULVER BLVD | W/E: JEFFERSON BLVD | I/S No: 18

AM/PM: AM | Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	2491	787	30	408	0	513	0	4	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	2491	787	30	408	0	513	0	4	0	0	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	0	2	0	0	1	0	0	1	1	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Free	Perm	none	Split	Auto	none	none

Critical Movements Diagram

SouthBound A: 294 B: 30

EastBound A: 0 B: 0

WestBound A: 4 B: 282

NorthBound A: 1246 B: 0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (1246 + 30 + 282 + 0) / 1500 = 0.969 LOS = E

Developed by Chun Wong, 12/94

CPROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:50:35 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: JEFFERSON BLVD I/S No: 19

AM/PM: AM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	46	2134	773	488	1508	256	428	187	625	181	480	66
AMBIENT												
RELATED												
PROJECT												
TOTAL	46	2134	773	488	1508	256	428	187	625	181	480	66

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 4 0 0 1 0	2 0 3 0 1 0 0	2 0 2 0 0 2 0	1 0 2 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	Auto

Critical Movements Diagram

SouthBound A: 441 B: 268

EastBound A: 182 B: 181

WestBound A: 94 B: 235

NorthBound A: 538 B: 46

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (538 + 268 + 235 + 182) / 1375 = 0.819 LOS D

Developed by Chun Wong, 12/94

CPROJAM

CalcaDB

March 10, 2010 ,Wednesday 12:50:35 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: WASHINGTON BLVD I/S No: 20

AM/PM: AM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	255	0	0	0	240	752	0	0	1227	79
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	255	0	0	0	240	752	0	0	1227	79

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 0 0 1 0	0 0 0 0 0 0 0	1 0 2 0 0 0 0	0 0 2 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	Auto	none	none	Perm	none	Perm	Auto

Critical Movements Diagram

SouthBound A: 0 B: 0

EastBound A: 614 B: 0

WestBound A: 376 B: 240

NorthBound A: 255 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (255 + 0 + 240 + 614) / 1200 = 0.924 LOS E

Developed by Chun Wong, 12/94

PM PEAK HOUR
LEVEL OF SERVICE WORKSHEETS

CPROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:50:56 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA / OCEAN AVE W/E: WASHINGTON BLVD I/S No: 1

AM/PM: PM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	544	343	315	119	572	50	245	738	50	44	693	497
AMBIENT												
RELATED												
PROJECT												
TOTAL	544	343	315	119	572	50	245	738	50	44	693	497

	NB							SB							WB							EB						
LANE	2	0	1	0	0	1	0	1	0	0	0	1	0	0	1	0	1	0	1	0	0	1	0	2	0	0	1	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	Auto	Split	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	622	119
EastBound	347	44
WestBound	394	245
NorthBound	343	299

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (343 + 622 + 245 + 347) / 1425 = 1.023 LOS F

Developed by Chun Wong, 12:94

CPROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:50:56 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: ADMIRALTY WY I/S No: 2

AM/PM: PM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	437	820	793	522	0	1199	0	780	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	437	820	793	522	0	1199	0	780	0	0	0

	NB							SB							WB							EB						
LANE	0	0	2	0	0	1	0	1	0	3	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Free	Prot-Fix	none	Split	OLA	none	none

Critical Movements Diagram

	A	B
SouthBound	174	793
EastBound	0	0
WestBound	0	659
NorthBound	219	0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (219 + 793 + 659 + 0) / 1425 = 1.103 LOS F

Developed by Chun Wong, 12:94

CPROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:50:56 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: PANAY WY I/S No: 3

AM/PM: PM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	2	826	32	292	1127	107	18	2	205	82	1	2
AMBIENT												
RELATED												
PROJECT												
TOTAL	2	826	32	292	1127	107	18	2	205	82	1	2

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	0 1 0 0 0 1 0	0 0 0 1 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	411	292
EastBound	85	82
WestBound	205	18
NorthBound	286	2

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (286 + 292 + 205 + 82) / 1500 = 0.507 LOS A

Developed by Chun Wong, 12 94

CPROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:50:56 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: MARQUESAS WY I/S No: 4

AM/PM: PM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	20	578	12	206	745	106	6	8	154	134	24	43
AMBIENT												
RELATED												
PROJECT												
TOTAL	20	578	12	206	745	106	6	8	154	134	24	43

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 0 1 0	0 1 0 0 1 0 0	1 0 1 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	373	206
EastBound	43	134
WestBound	154	6
NorthBound	197	20

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (197 + 206 + 154 + 134) / 1500 = 0.391 LOS A

Developed by Chun Wong, 12 94

CPROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:50:56 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: TAHITI WY I/S No: 5

AM/PM: PM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	2	437	12	131	588	25	6	0	90	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	2	437	12	131	588	25	6	0	90	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 1 0 0	1 0 1 0 1 0 0	0 1 0 0 1 0 0	0 0 0 0 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Split	Auto	□none□	□none□

Critical Movements Diagram

	SouthBound	EastBound	WestBound	NorthBound
A:	307	0	90	229
B:	131	0	6	2

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (229 □ 131 □ 90 □ 0) / □1500 □ 0.230 LOS □ A

Developed by Chun Wong, 12/94

CPROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:50:56 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: BORA BORA WY I/S No: 6

AM/PM: PM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	3	347	5	160	440	20	1	0	92	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	3	347	5	160	440	20	1	0	92	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 1 0 0	1 0 1 0 1 0 0	0 0 0 1 0 0 0	0 0 0 0 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	□none□	□none□

Critical Movements Diagram

	SouthBound	EastBound	WestBound	NorthBound
A:	230	0	93	179
B:	160	0	1	3

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (179 □ 160 □ 93 □ 0) / 1200 □ 0.360 LOS □ A

Developed by Chun Wong, 12/94

CPROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:50:56 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: ADMIRALTY WY I/S No: 7

AM/PM: PM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	64	104	156	346	210	202	216	1707	132	75	1460	51
AMBIENT												
RELATED												
PROJECT												
TOTAL	64	104	156	346	210	202	216	1707	132	75	1460	51

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 0 0 1 0 0	1 0 1 0 0 1 0	1 0 1 0 1 0 0	1 0 1 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 210 B: 346

EastBound A: 756 B: 75

WestBound A: 920 B: 216

NorthBound A: 260 B: 64

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (260 + 346 + 920 + 75) / 1500 = 0.997 LOS E

Developed by Chun Wong, 12/94

CPROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:50:56 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: WASHINGTON BLVD I/S No: 8

AM/PM: PM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	674	1954	371	323	1819	251	382	1006	398	184	836	649
AMBIENT												
RELATED												
PROJECT												
TOTAL	674	1954	371	323	1819	251	382	1006	398	184	836	649

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 2 0 1 0 0	2 0 2 0 1 0 0	2 0 2 0 0 1 0	2 0 2 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	OLA

Critical Movements Diagram

SouthBound A: 690 B: 178

EastBound A: 418 B: 101

WestBound A: 503 B: 210

NorthBound A: 775 B: 371

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (371 + 690 + 210 + 418) / 1375 = 1.158 LOS F

Developed by Chun Wong, 12/94

CPROJPM

CalcaDB

April 21, 2010 ,Wednesday 01:13:22 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: SR-90 ON/OFF RAMPS I/S No: 9

AM/PM: PM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	2212	218	942	2176	0	170	0	1202	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	2212	218	942	2176	0	170	0	1202	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 2 0 1 0 0	2 0 3 0 0 0 0	2 0 0 0 0 2 0	0 0 0 0 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Prot-Fix	□none□	Split	OLA	□none□	□none□

Critical Movements Diagram

SouthBound A: 725 B: 518

EastBound A: 0 B: 0

WestBound A: 143 B: 94

NorthBound A: 810 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (810 □ 518 □ 143 □ 0) / □1425 □ 0.962 LOS □ E

Developed by Chun Wong, 12/94

CPROJPM

CalcaDB

April 21, 2010 ,Wednesday 01:13:22 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: BALI WY I/S No: 10

AM/PM: PM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	34	1570	208	206	1605	37	70	85	392	41	99	42
AMBIENT									-206			
RELATED												
PROJECT												
TOTAL	34	1570	208	206	1605	37	70	85	186	41	99	42

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	1 0 1 0 1 0 0	1 0 0 0 1 1 0	0 1 0 0 1 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	OLA	Perm	Auto

Critical Movements Diagram

SouthBound A: 821 B: 206

EastBound A: 91 B: 41

WestBound A: 136 B: 70

NorthBound A: 889 B: 34

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (889 □ 206 □ 136 □ 41) / □1425 □ 0.823 LOS □ D

Developed by Chun Wong, 12/94

CPROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:50:56 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: BALI WY I/S No: 11

AM/PM: PM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	162	2085	20	6	1972	375	12	0	31	404	3	109
AMBIENT												
RELATED												
PROJECT												
TOTAL	162	2085	20	6	1972	375	12	0	31	404	3	109

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	0 0 0 1 0 0 0	1 1 0 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	Auto	Split	Auto

Critical Movements Diagram

SouthBound A: 782 B: 6

EastBound A: 204 B: 204

WestBound A: 43 B: 12

NorthBound A: 702 B: 162

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (162 + 782 + 43 + 204) / 1375 = 0.796 LOS C

Developed by Chun Wong, 12.94

CPROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:50:56 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: MINDANAO WY I/S No: 12

AM/PM: PM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	43	1066	80	555	1205	110	355	223	769	156	136	35
AMBIENT												
RELATED												
PROJECT												
TOTAL	43	1066	80	555	1205	110	355	223	769	156	136	35

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	1 0 1 0 1 0 0	1 1 0 0 0 1 0	1 0 0 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	OLA	Split	Auto

Critical Movements Diagram

SouthBound A: 658 B: 555

EastBound A: 171 B: 156

WestBound A: 289 B: 289

NorthBound A: 573 B: 43

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (573 + 555 + 289 + 171) / 1375 = 1.085 LOS F

Developed by Chun Wong, 12.94

CPROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:50:56 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: MINDANAO WY I/S No: 13

AM/PM: PM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	175	2093	317	209	1910	120	412	955	101	0	783	182
AMBIENT												
RELATED												
PROJECT												
TOTAL	175	2093	317	209	1910	120	412	955	101	0	783	182

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 3 0 0 1 0	1 0 2 0 1 0 0	2 0 1 0 1 0 0	0 0 1 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 677 B: 209

EastBound A: 483 B: 0

WestBound A: 528 B: 227

NorthBound A: 698 B: 175

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C $\frac{698 \quad 209 \quad 227 \quad 483}{1375}$ 1.106 LOS F

Developed by Chun Wong, 12/94

CPROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:50:56 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: FIJI WY I/S No: 14

AM/PM: PM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	0	991	0	194	0	286	619	122	340	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	991	0	194	0	286	619	122	340	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 0 0 0 0	2 0 0 0 0 1 0	0 0 1 0 0 1 0	1 0 2 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	none	none	Split	Free	Perm	Free	Perm	none

Critical Movements Diagram

SouthBound A: 0 B: 545

EastBound A: 170 B: 122

WestBound A: 286 B: 0

NorthBound A: 0 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C $\frac{0 \quad 545 \quad 286 \quad 122}{1500}$ 0.565 LOS A

Developed by Chun Wong, 12/94

CPROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:50:56 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: FIJI WY I/S No: 15

AM/PM: PM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	928	2357	24	92	2345	146	42	23	40	161	8	1162
AMBIENT												
RELATED												
PROJECT												
TOTAL	928	2357	24	92	2345	146	42	23	40	161	8	1162

	NB							SB							WB							EB						
LANE	2	0	2	0	1	0	0	1	0	2	0	1	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Free

Critical Movements Diagram

SouthBound A: 830 B: 92

EastBound A: 8 B: 161

WestBound A: 105 B: 42

NorthBound A: 794 B: 510

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) B(E/B)

$V/C = \frac{510 + 830 + 105 + 161}{1425} = 1.057$ LOS F

Developed by Chun Wong, 12/94

CPROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:50:56 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 EB ON/OFF RAMPS I/S No: 16

AM/PM: PM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	536	867	817	1335	0	0	0	0	12	1104	41
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	536	867	817	1335	0	0	0	0	12	1104	41

	NB							SB							WB							EB						
LANE	0	0	1	0	1	1	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Prot-Fix	none	none	none	Split	Auto

Critical Movements Diagram

SouthBound A: 668 B: 449

EastBound A: 573 B: 12

WestBound A: 0 B: 0

NorthBound A: 468 B: 0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

$V/C = \frac{468 + 449 + 0 + 573}{1425} = 0.976$ LOS E

Developed by Chun Wong, 12/94

CPROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:50:56 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY   W/E: SR-90 WB ON/OFF RAMPS   I/S No: 17

AM/PM: PM   Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	18	531	0	0	1235	91	922	1286	525	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	18	531	0	0	1235	91	922	1286	525	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 0 0 0	0 0 2 0 1 0 0	1 1 1 0 0 1 0	0 0 0 0 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	none	Perm	Auto	Split	Auto	none	none

Critical Movements Diagram

	A	B
SouthBound	442	0
EastBound	0	0
WestBound	736	736
NorthBound	266	18

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (18 + 442 + 736 + 0) / 1425 = 0.769   LOS C

Developed by Chun Wong, 12 94

CPROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:50:56 PM

INTERSECTION DATA SUMMARY SHEET

N/S: CULVER BLVD   W/E: JEFFERSON BLVD   I/S No: 18

AM/PM: PM   Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	947	379	65	1417	0	1521	0	3	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	947	379	65	1417	0	1521	0	3	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 2 0 0 1 0	0 1 1 0 0 0 0	2 0 0 0 0 1 0	0 0 0 0 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Free	Perm	none	Split	Auto	none	none

Critical Movements Diagram

	A	B
SouthBound	904	65
EastBound	0	0
WestBound	3	837
NorthBound	474	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (0 + 904 + 837 + 0) / 1500 = 1.091   LOS F

Developed by Chun Wong, 12 94

CPROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:50:56 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: JEFFERSON BLVD I/S No: 19

AM/PM: PM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	66	2022	346	671	1999	833	666	624	838	72	299	66
AMBIENT												
RELATED												
PROJECT												
TOTAL	66	2022	346	671	1999	833	666	624	838	72	299	66

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	4	0	0	1	0	2	0	3	0	1	0	0	2	0	2	0	0	2	0	1	0	2	0	1	0	0

	NORTHBOUND Phasing	NORTHBOUND RTOR	SOUTHBOUND Phasing	SOUTHBOUND RTOR	WESTBOUND Phasing	WESTBOUND RTOR	EASTBOUND Phasing	EASTBOUND RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	Auto

Critical Movements Diagram

SouthBound A: 833 B: 369

EastBound A: 122 B: 72

WestBound A: 312 B: 366

NorthBound A: 506 B: 66

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (66 □ 833 □ 366 □ 122) / □1375 □ 0.939 LOS □ E

Developed by Chun Wong, 12:94

CPROJPM

CalcaDB

March 10, 2010 ,Wednesday 12:50:56 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: WASHINGTON BLVD I/S No: 20

AM/PM: PM Comments: CUMULATIVE(2020) W/PROPOSED LCP BUILDOUT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	228	0	0	0	490	1023	0	0	966	137
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	228	0	0	0	490	1023	0	0	966	137

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	2	0	0	1	0

	NORTHBOUND Phasing	NORTHBOUND RTOR	SOUTHBOUND Phasing	SOUTHBOUND RTOR	WESTBOUND Phasing	WESTBOUND RTOR	EASTBOUND Phasing	EASTBOUND RTOR
SIGNAL	Split	Auto	□none□	□none□	Perm	□none□	Perm	Auto

Critical Movements Diagram

SouthBound A: 0 B: 0

EastBound A: 483 B: 0

WestBound A: 512 B: 490

NorthBound A: 228 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ A(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (228 □ 0 □ 490 □ 483) / 1200 □ 1.001 LOS □ F

Developed by Chun Wong, 12:94

APPENDIX L

Transportation Mitigation Program in the Approved Local Coastal Program (LCP)

APPENDIX L

TRANSPORTATION IMPROVEMENT PROGRAM

I. INTRODUCTION

The Transportation Improvement Program (TIP) addresses in specific detail transportation and circulation issues initially identified in the Marina del Rey Land Use Plan, and discussed in the Specific Plan component of this LIP. The objectives of this TIP are:

- Develop and set in motion programs for the detailed design and implementation of those transportation improvements necessary to accommodate and adequately serve future development authorized by the certified Land Use Plan (LUP);

- Maintain and enhance public access to coastal recreational opportunities in and adjacent to Marina del Rey; and

- Develop and institute appropriate financing mechanisms to generate the revenues necessary for TIP implementation.

The transportation improvements called for in the LUP include both capital and non-capital programs designed to enhance regional access to the coast and expand the capacity of the local roadway system. These improvements include:

- Improvement of Admiralty Way to 5 lanes within existing right-of-way and improvement of key intersections to enhanced Marina access;

- Surface circulation improvements primarily involving improved access to and circulation within the existing Marina;

- Implementation of project-specific measure to mitigate within the Marina and adjacent areas the cumulative impacts of new development; potential mitigation measures include a shuttle program designed to facilitate shoreline access; and

- Development and implementation of a Transportation Systems Management (TSM)/Transportation Demand Management (TDM) program to achieve efficient use of local and regional transportation facilities.

The ensuing sections define in greater detail and above identified improvements. Part IV sets forth the improvement financing strategy. This includes the requirement for agreements between developers and the County to assure fair financing and timely construction of improvement sin the conjunction with the new development.

II. CIRCULATION SYSTEM IMPROVEMENTS

A number of local circulation system improvements are required to accommodate traffic generated by new development within the existing Marina. This new cycle of development will include expansion and recycling of hotels, restaurant, boat slips, marine commercial, residential and commercial uses. The Marina del Rey Land Use Plan specifies that improvement of Admiralty Way and improvements to key intersections may be used to provide sufficient circulation capacity to accommodate the build out allocated in each development zone. These improvements are divided into two categories according to mitigation needs, improvement phasing and funding.

A. Category 1 Improvements

Category 1 improvements consist of potential internal Marina del Rey improvements. The following circulation improvements represent the priority of mitigation measures which were identified in the DKS traffic study of 1991 to be necessary to mitigate internal traffic impacts of redevelopment within Marina del Rey. These improvements may be used to mitigate the increase in P.M. speak hour trips generated by otherwise approvable development. The estimated Level of Service (LOS), if all Phase II development and Category I traffic improvements are completed, is shown in Figure 13 of the LUP.

Category 1 improvements will be financed and implemented through agreements between lessees, consistent with the Improvement Financing and Phasing Section of this TIP. Completion of Category 1 improvements will provide the mitigation capacity needed within Marina del Rey for 100 percent of the build out allocated in the Specific Plan. The following measures are included in Category 1:

1. Admiralty Way 5-Lane Improvement. The Marina del Rey Traffic Study (1991) prepared by DKS Associates analyzed a number of potential transportation improvements and found that the improvement of Admiralty Way to 5 lanes, in conjunction with the intersection improvements discussed below, provides sufficient traffic capacity to mitigate levels of development anticipated in the existing Marina. The lane will be added from Fiji Way to Via Marina in the northbound/westbound direction to accommodate the p.m. peak period traffic flow. The addition of a fifth lane will be accomplished within existing right-of-way by moving the median and re-striping the roadway. Future development of sub-regional improvements to connect Admiralty Way with Route 90 may require an additional lane on Admiralty Way; this is discussed under Category 3 improvements.

2. ATSAC or Other Advanced Signal Synchronization. Automated Traffic Surveillance and Control (ATSAC) is traffic signal synchronization technology installed and administered by the City of Los Angeles. The ATSAC program is a sophisticated traffic monitoring and control system which records the volume and speed of vehicular traffic and responds to changing traffic flow patterns by adjusting signal timing to reduce traffic congestion and vehicular delays.

The County of Los Angeles also administers a traffic signal synchronization program which is based on continuously correcting signal timing and progression. Both the ATSAC system and the County's synchronization program have been shown to reduce the number of stops along travel corridors, improve average travel speeds and improve intersection level of service. The effectiveness of this technology depends on the installation of synchronization systems at each signalized intersection along a given corridor.

ATSAC or a similar signal synchronization technology will be installed along Admiralty Way at its intersections with Via Marina, Palawan Way, Bali Way and Mindanao Way. Additionally, ATSAC or similar synchronization technology will be installed along Lincoln Boulevard at its intersections with Bali Way, Fiji Way.

3. Via Marina at Admiralty Way. Widen the south side of Admiralty Way to accommodate a triple west bound left turn movement, and two lanes eastbound on Admiralty Way with a right-turn merge lane from northbound Via Marina. At some point in the future, this intersection may be reconstructed to improve traffic flow along Admiralty Way (see Category 3 improvements).

4. Palawan Way at Admiralty Way.

   a) Palawan Way Northbound at Admiralty Way. Re-stripe northbound Palawan Way to provide a separate right turn approach lane to Admiralty way.

   b) Palawan Way Southbound at Admiralty Way. Re-stripe southbound Palawan Way to convert one through lane into a second left-turn approach lane to Admiralty Way.

5. Lincoln Boulevard at Bali Way. Widen southbound Lincoln Boulevard to provide a right-turn lane at Bali Way.

6. Admiralty Way at Mindanao Way. Widen northbound Admiralty Way to provide a right-turn lane at Mindanao Way.

7. Lincoln Boulevard at Mindanao Way. Widen Lincoln Boulevard, relocate and narrow median island, to provide a northbound right turn or through lane at Mindanao.

8. Admiralty Way at Fiji Way. Widen southbound Admiralty Way approach to Fiji Way to provide three through lanes.

9. Fiji Way at Lincoln Boulevard. Widen eastbound Fiji Way approach to Lincoln Boulevard to provide an additional left turn lane at Lincoln Boulevard.

B. Category 2 Improvements (Reserved for Area A)

C. Category 3 Improvements

Category 3 consists of improvements which may be employed to mitigate the cumulative impacts of development in the LCP study area on the regional transportation system serving Marina del Rey and adjacent areas. Development shall not be approved that will significantly exceed the capacity of the sub-regional street system. All significant adverse traffic impacts, generated by development in the LCP study area, upon the circulation system outside the unincorporated area of Marina del Rey, shall be mitigated by the developer prior to receiving final discretionary permits.

Ninety-three percent of all trips originate or end outside Marina del Rey. All development shall contribute a calculated fair share toward construction of improvements necessary to mitigate all of the development's significant adverse cumulative traffic impacts. The traffic studies prepared as part of each project's environmental documentation shall address the project's impacts on adjacent state highways and other regional collector streets, and shall be the basis for determining the amount of cumulative impacts which the project has on regional traffic due to the increase in the number of trips that the project generates that begin or end outside the LUP area.

Studies prepared in compliance with this requirement shall show: 1) the number of daily and peak hour trips generated by the development; 2) the number and percentage of those trips originating and terminating outside Marina del Rey; and 3) the direction of the trips upon departing the existing Marina. Based on this documentation, all development shall contribute its proportionate fair share of the Category 3 improvements that will fully mitigate the level of impact such development will have on the regional system serving the LUP area. The study shall be provided at the time of the permit application.

Based on the information prepared regarding traffic impacts, individual development projects may be required to contribute a calculated fair share toward construction of improvements listed below, or may be required to construct other specified improvements which mitigate all significant cumulative impacts of development on the regional transportation system.

1. Redesign of Admiralty Way/Via Marina Intersection. The intersection of Admiralty Way and Via Marina is currently a "T" intersection at which Admiralty Way forms the stem of the "T". A redesign of this intersection could make Admiralty way a continuous loop road with Via marina becoming the stem of the "T". As part of this reconfiguration, a modern roundabout could be constructed which would enhance traffic flow and reduce motorist' delay. This improvement would facilitate

periphery access around the Marina and could accompany a redevelopment of the public beach area to provide new water views. This measure may provide additional traffic capacity, but additional study is needed. Designation of Admiralty Way as a Scenic Highway would accompany the redesign. This improvement is an unscheduled, long-term measure.

2. Shuttle System/Enhanced Coastal Access. The Marina del Rey Traffic study (1991) evaluated the potential for implementation of a shuttle bus system in Marina del Rey. The study found that shuttle service would likely not be a significant mitigation measure for traffic impacts and would be most beneficial if developed in conjunction with a light rail line into the Marina area. Since light rail routes and designs area uncertain at this time establishment of a shuttle service in the Marina in the near term is unlikely.

3. Periphery parking lots. The purchase of land for park-and-ride lots and periphery parking represents a viable method for reducing the number of vehicles attempting to reach beach parking lots and other coastal destinations. Establishment of periphery parking lots should coincide with creation of a shuttle system or “dash” service to provide transportation from such parking lots to the coast. Implementation of a periphery parking lot program is unscheduled, but capital may be used from the Coastal Improvement Fund for the leasing or purchase of such lots and the creation of a park-and-ride or dash system to service lots.

4. Lincoln People-mover. A people-mover system along Lincoln Boulevard could facilitate north-south access without the cost or impact of light rail transit. Such a system could be elevated over the center of Lincoln Boulevard on a narrow, elevated right –of-way without the loss of any traffic lanes. The system could connect Parking Lot C at Los Angeles international Airport, which is proposed as the terminus for the Green Line transit service, with Santa Monica and point’s in-between.

5. Light Rail. Implementation of a light rail transit line is unfunded and unscheduled at this time. A transit line extending from Parking Lot C at Los Angeles International Airport north along Lincoln Boulevard to Santa Monica has been studied, as has a line which would follow Lincoln Boulevard to Culver Boulevard and then eastward to the Santa Monica Freeway. Since a number of alternatives exist, and none area likely to be developed in the near term, light rail does not appear to be viable transportation option over the next twenty years.

6. Route 90 Extensions. If the scope of the project and the funding is agreed to by the board of supervisors, the City of Los Angeles, and Caltrans, connect Route 90 to Admiralty Way via a fly-over across Lincoln Boulevard, widen Admiralty Way by an additional westbound lane to parcel OT, thence connect Admiralty Way with Washington Street through parcel OT. This improvement shall only go forward with the agreement of all these agencies.

7. Other Improvements. Other coastal access or public transportation improvements which mitigate significant adverse cumulative impacts of development on the regional transportation system, including those improvements identified in Chapter 11 of the certified LUP.

III. TRANSPORTATION SYSTEM MANAGEMENT AND TRANSPORTATION DEMAND MANAGEMENT PROGRAMS

A. Introduction

The Transportation System Management (TSM) AND Transportation Demand Management (TDM) programs are required as a condition for new development. These guidelines shall be sued when establishing TSM and TDM programs. TSM improvements consist of engineering improvements to enhance the system capacity and improve traffic flow; TDM improvements encourage people to use alternatives to the single person vehicle such as car pools, van pools, changing travel modes or to eliminate unnecessary trips, particularly during times of peak demand. These measures are relatively low cost remedies and include both capital and non-capital programs.

B. TSM Alternatives

The following TSM improvements may be employed to implement LUP policy. They can improve the flow of traffic and reduce traffic congestion. They are relatively low-cost measures and can be implemented quickly.

1. Traffic Signal Synchronization. State of the art traffic signal synchronization can reduce delay at intersections and improve traffic flow. This measure was previously discussed under Category 1 improvements.

2. One-Way Streets. A pair of one-way streets, known as a couplet, can improve traffic capacity and flow.

3. Roundabouts. Modern roundabouts are relatively low-cost and can reduce delay for motorist. Adequate right-of-way is needed for optimal operation.

4. Geometric Modifications. Geometric modifications of intersections and the addition of turning lanes can improve the efficiency of intersections and increase traffic capacity.

C. TDM Alternatives

The following sections list a number of TDM measures that may be employed to implement LUP policy. Implementation of these strategies will require a partnership between local government and private enterprise. Opportunities for application of these TDM strategies will vary. Applicants for projects in Marina del Rey shall consult with the Department of Public Works and the Department of Regional Planning to develop as many strategies as feasible for each site, and to address cumulative problems related to several sites.

1. Park and Ride Lots. Coastal Improvement Fund monies may be used to purchase Park and Ride lots to be used for the various TDM programs.

2. Ridesharing. Since the most effective means of producing greater auto occupancy for work trips is organizing ridesharing by place of employment, the majority of the measures described are employer-based and hence require the cooperation of the private sector. These employer-directed strategies involve implementing the following actions.

a. Car pool and van pool matching and promotion: Employers shall provide in-house rideshare matching assistance and promote ride-sharing (Commuter Transportation Services is a resource).

b. Financial incentives for ridesharing: Financial incentives involve the payment by an employer of various kinds of direct or indirect subsidies to their employee to encourage ridesharing. An employer may direct cash payments to all persons who rideshare with two or more people, fifteen or more days each month. Alternatively, the payment could be based on mileage traveled or graduated by the size of the pool. Also, subsidies may include special fringe benefits such as accrual of a “bonus” vacation day for every 100 days traveled to work in a car pool. Finally, company discounts for various kinds of goods or services, for which only members of car pools are eligible, may be offered.

3. Transit Promotion and Incentives. As with ridesharing, private and public cooperation can promote the use of transit by providing financial incentives and facilities. Also, all subsidized bus passes or other financial incentives could be provided for bus users similar to those provided for ridesharing.

4. Modified Work Scheduled and Flex Time. To reduce the actual number of work trips, all employers should consider Modified Work Schedules. Schedules should feature longer hours per day and fewer work days per week. The Flex Time concept allows flexible work hours to reduce peak hour trips.

5. Increased Bicycle Use. Bicycle facilities should be provided at places of employment, restaurants, and visitor-oriented facilities and at public transportation facilities. Facilities should include bicycle racks, locker rooms and showers.

6. Parking related strategies. There is a couple of parking related strategies to promote ride-sharing and to encourage transit usage. These methods include:

a. Preferential parking for ride-sharers: this policy involves providing car pools preferential parking privilege at their place of work. This could include giving guaranteed space to car pools or establishing a priority system for issuing parking permits. For example, in large lots of most accessible spaces could be assigned to car pools. If covered parking is available, as many can be implemented voluntarily by a wide range for employers. It constitutes a low-cost, immediate action and workable strategy to promote ridesharing and reduce traffic congestion.

b. Elimination of free employee parking: The purpose of this strategy is to eliminate all free and subsidized employees parking by requiring employees to pay prevailing commercial parking rates. When implementing this strategy, employers should encourage and assist employees in switching from low to high occupancy vehicles, by forming car pools, ect.

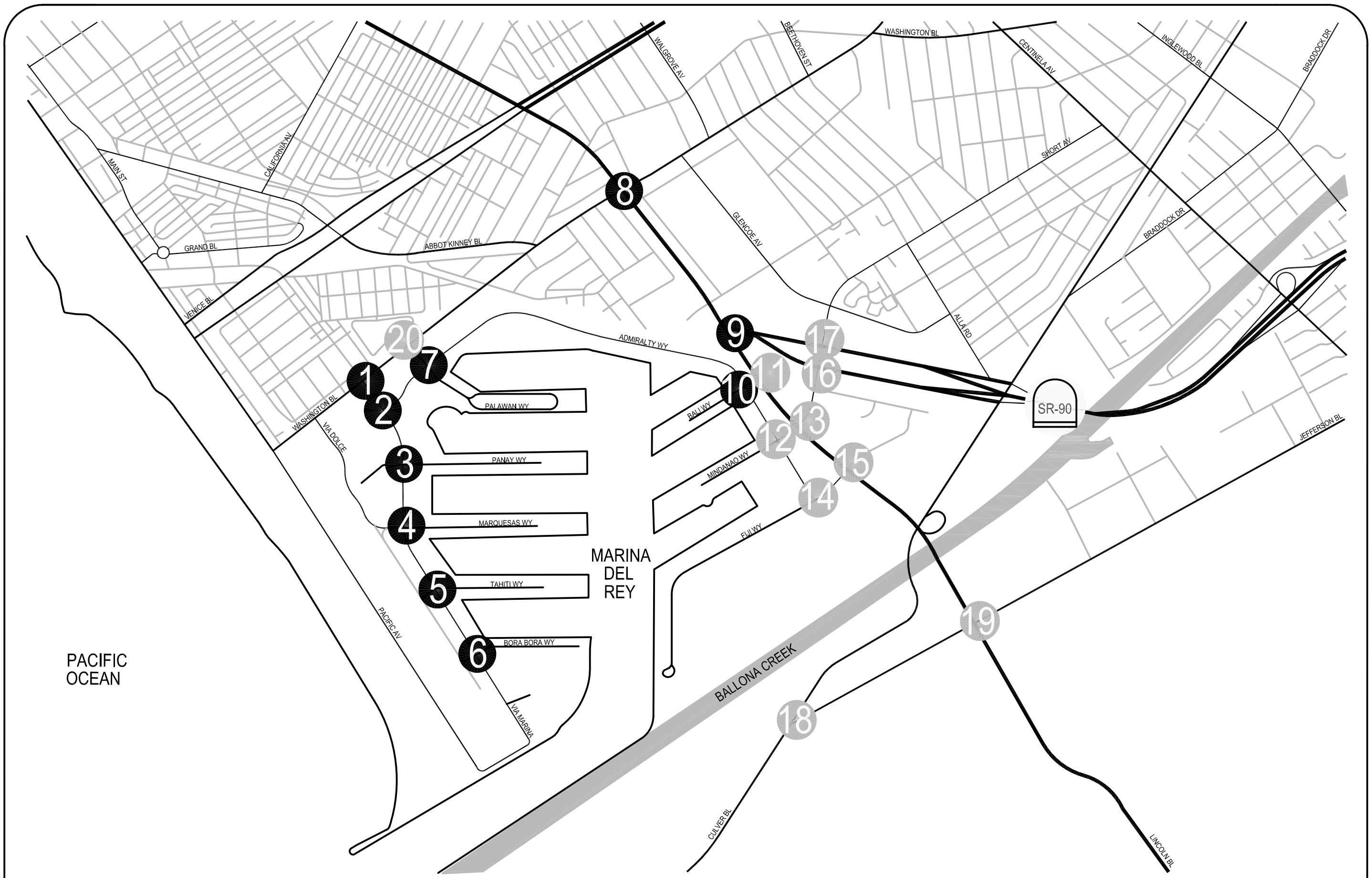
7. Telecommuting. This strategy involves the use of telecommunications technology as a substitute for travel. People whose jobs involve telecommunications technology such as computers and work processors maybe able to work at home, avoiding a trip during peak hours. Working at home may also be an option for many others whose jobs may not directly involve telecommunications (except possibly telephones). Examples of these include clerical work, typing, research and writing. Working at home could be full or part-time, depending on the need to associate with the office. An alternative could be working at home in the morning, and then driving to work in off peak hours. Lastly, the use of telecommuting can leave can lead to an improved midday level of service.

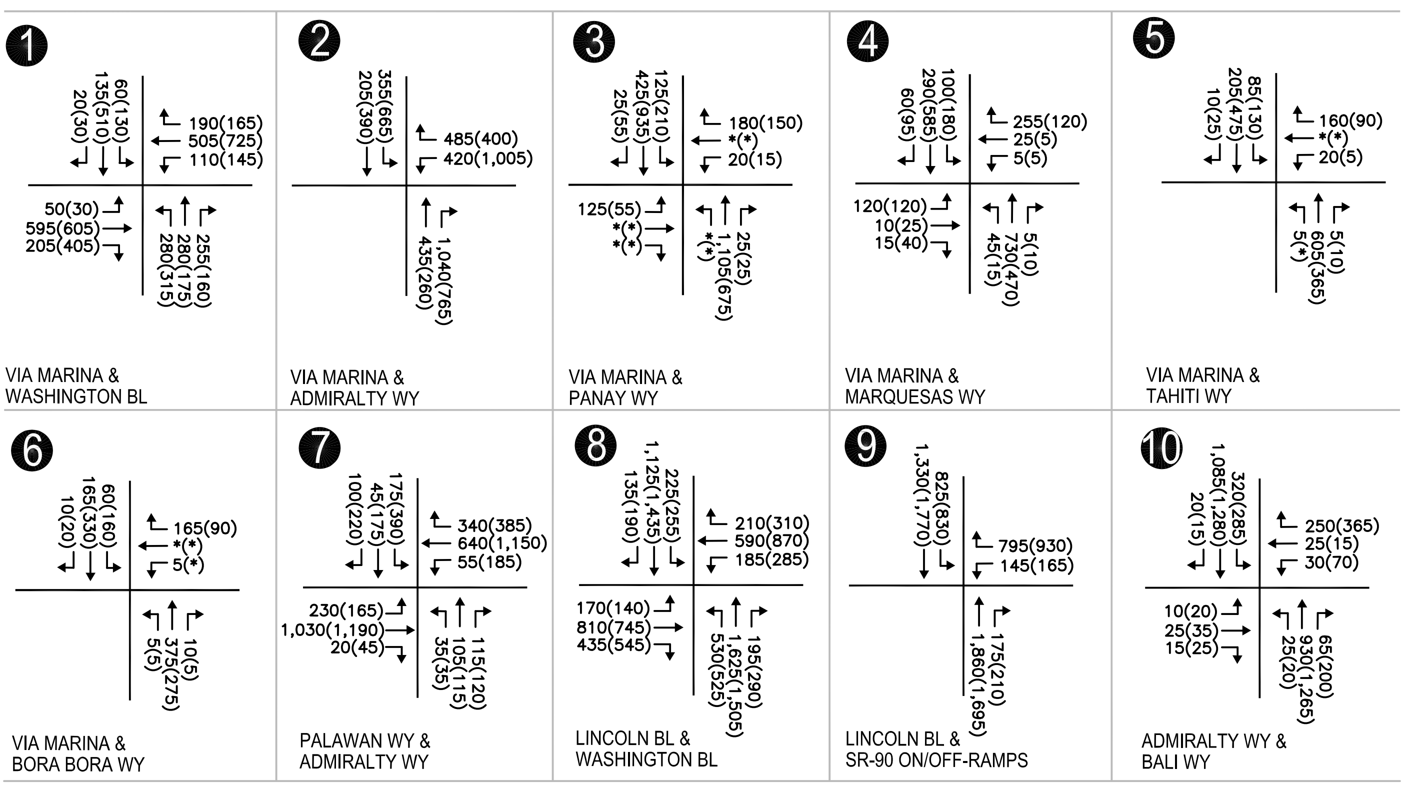
APPENDIX M

Ambient (2020) Conditions with Pipeline Projects and Improvements

Traffic Volumes and Level of Service Worksheets

All signalized intersections include V/C credit of 0.10 to account from ATSAC and ATCS. ATCS credit of 0.03 is not automatically reflected on the capacity calculation worksheets.





LEGEND:

XXX(XXX) - AM(PM) PEAK HOUR TRAFFIC VOLUMES ROUNDED TO THE NEAREST 5 VEHICLES

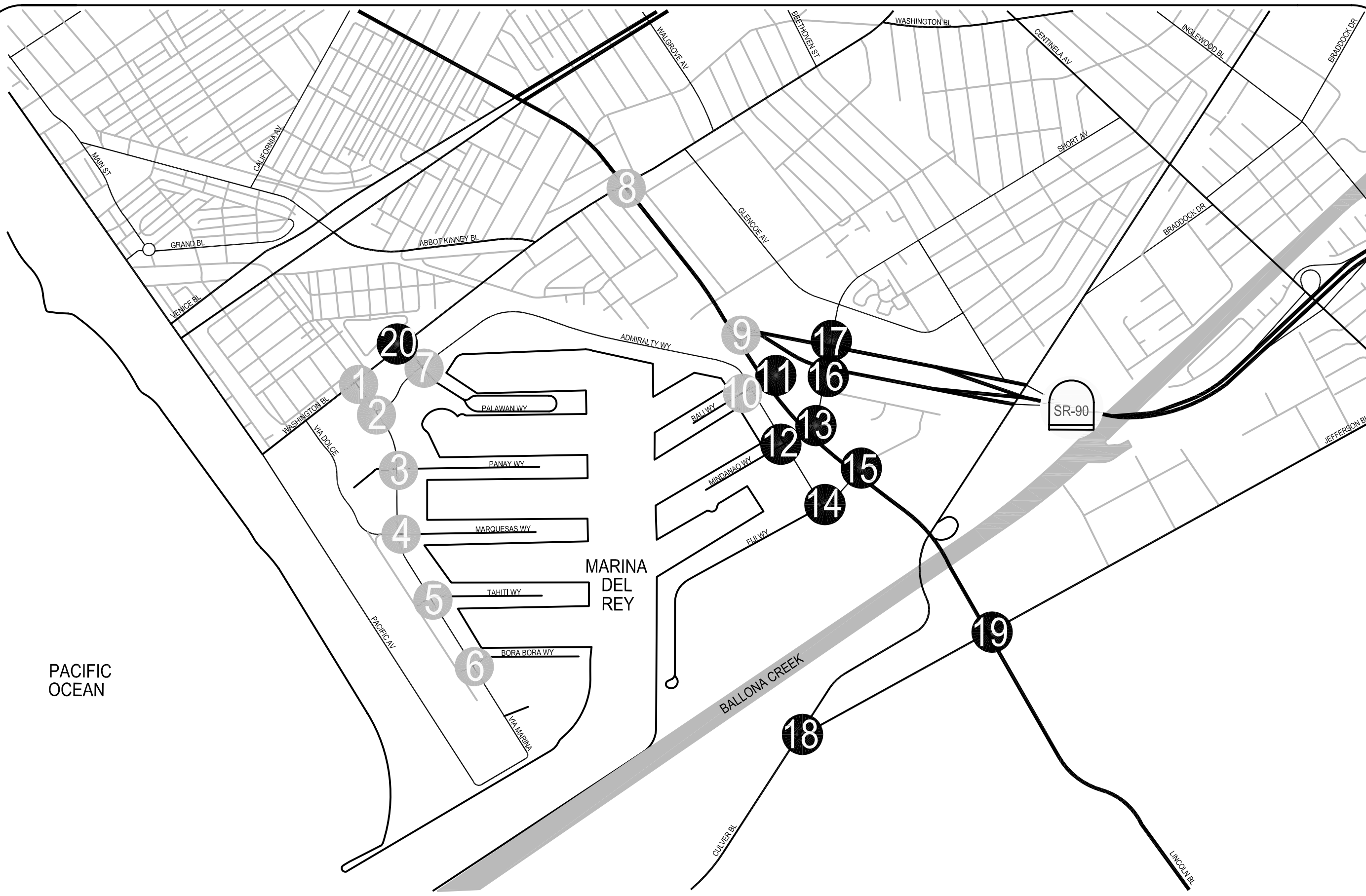
- STUDY INTERSECTION

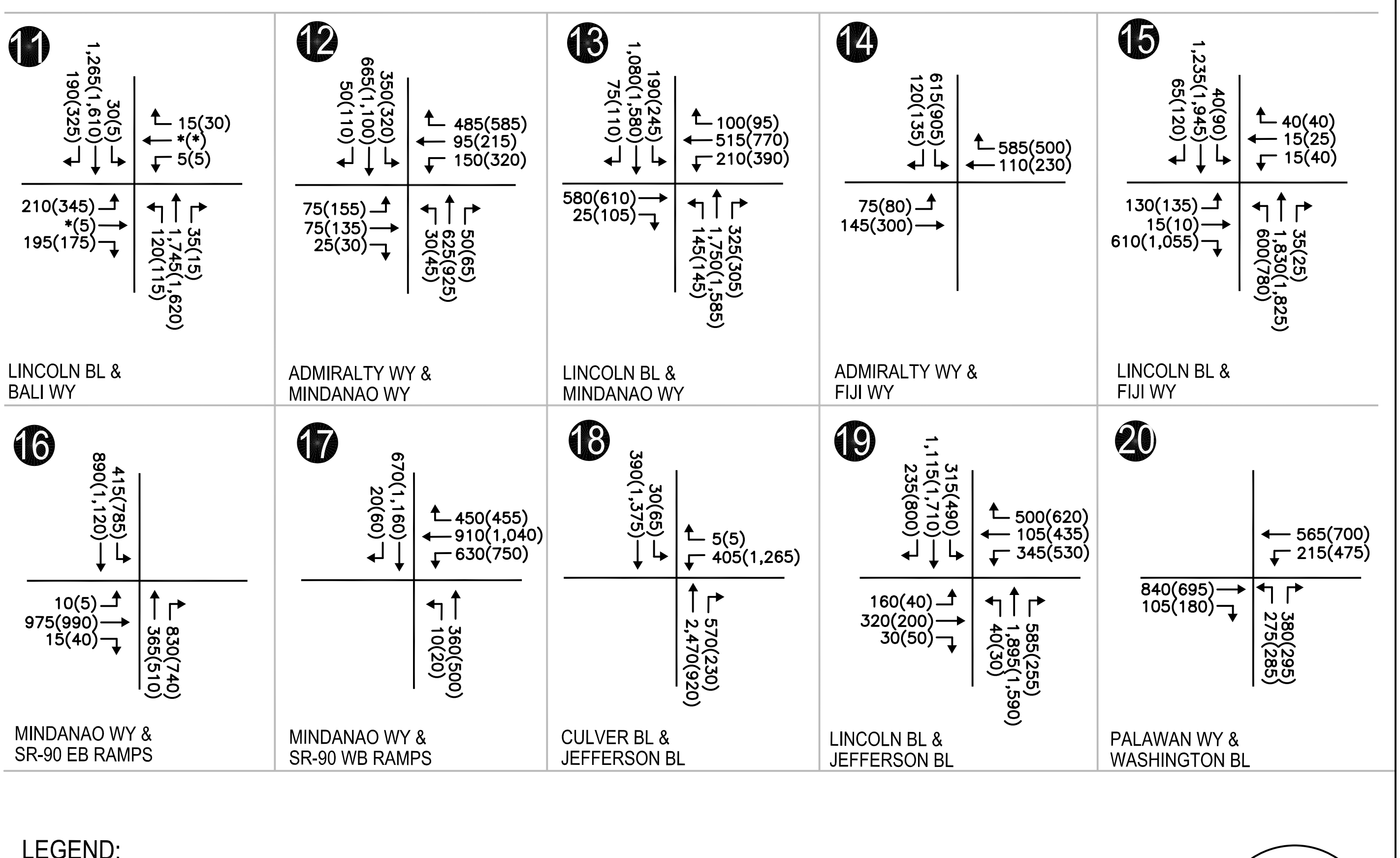
* - NEGLIGIBLE VOLUME

N
Not to scale

APPENDIX M-1
AMBIENT (2020) CONDITIONS WITH PIPELINE PROJECTS AND IMPROVEMENTS TRAFFIC VOLUMES

RAJU Associates, Inc.





LEGEND:

XXX(XXX) - AM(PM) PEAK HOUR TRAFFIC VOLUMES ROUNDED TO THE NEAREST 5 VEHICLES

\# - STUDY INTERSECTION

* - NEGLIGIBLE VOLUME

N
Not to scale

APPENDIX M-2
AMBIENT (2020) CONDITIONS WITH PIPELINE PROJECTS AND IMPROVEMENTS TRAFFIC VOLUMES

RAJU Associates, Inc.

AM PEAK HOUR
LEVEL OF SERVICE WORKSHEETS

APLIMPAM

CalcaDB

April 26, 2010 ,Monday 03:38:57 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA / OCEAN AVE W/E: WASHINGTON BLVD I/S No: 1

AM/PM: AM Comments: AMBIENT(2020)W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	279	279	253	59	136	21	108	506	192	49	595	207
AMBIENT												
RELATED												
PROJECT												
TOTAL	279	279	253	59	136	21	108	506	192	49	595	207

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	2	0	1	0	0	1	0	1	0	0	0	1	0	0	1	0	1	0	1	0	0	1	0	2	0	0	1	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	Auto	Split	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	157	59
EastBound	298	49
WestBound	349	108
NorthBound	279	153

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ A(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ $\frac{279 □ 157 □ 108 □ 298}{□1425}$ □ 0.521 LOS □ A

Developed by Chun Wong, 12/94

APLIMPAM

CalcaDB

April 26, 2010 ,Monday 03:38:57 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: ADMIRALTY WY I/S No: 2

AM/PM: AM Comments: AMB(2020)W/LCP PIPELINE PROJS W/IMPROVEMENT(ALT A)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	436	1039	354	204	0	421	0	483	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	436	1039	354	204	0	421	0	483	0	0	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	0	2	0	0	1	0	2	0	2	0	0	0	0	3	0	0	0	0	2	0	0	0	0	0	0	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Free	Prot-Fix	□none□	Split	OLA	□none□	□none□

Critical Movements Diagram

	A	B
SouthBound	102	195
EastBound	0	0
WestBound	71	156
NorthBound	218	0

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ $\frac{218 □ 195 □ 156 □ 0}{□1425}$ □ 0.329 LOS □ A

Developed by Chun Wong, 12/94

APLIMPAM

CalcaDB

April 26, 2010 ,Monday 03:38:57 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: ADMIRALY WAY I/S No: 2

AM/PM: AM Comments: AMB(2020)W/LCP PIPELINE PROJS W/IMPROVEMENT(ALT B)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	0	354	0	204	0	421	483	436	1039	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	354	0	204	0	421	483	436	1039	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 0 0 0 0	2 0 0 0 0 1 0	0 0 2 0 0 1 0	2 0 2 0 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	none	none	Split	Auto	Perm	OLA	Prot-Fix	none

Critical Movements Diagram

SouthBound A: 84 B: 195

EastBound A: 520 B: 240

WestBound A: 288 B: 0

NorthBound A: 0 B: 0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (0 + 195 + 288 + 240) / 1425 = 0.437 LOS A

Developed by Chun Wong, 12.94

APLIMPAM

CalcaDB

April 26, 2010 ,Monday 03:38:57 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: PANAY WY I/S No: 3

AM/PM: AM Comments: AMBIENT(2020)W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	1103	23	124	424	25	20	0	181	127	1	2
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	1103	23	124	424	25	20	0	181	127	1	2

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	0 1 0 0 0 1 0	0 0 0 1 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 150 B: 124

EastBound A: 130 B: 127

WestBound A: 181 B: 20

NorthBound A: 375 B: 0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (375 + 124 + 181 + 127) / 1500 = 0.468 LOS A

Developed by Chun Wong, 12.94

APLIMPAM

CalcaDB

April 26, 2010 ,Monday 03:38:57 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: MARQUESAS WY I/S No: 4

AM/PM: AM Comments: AMBIENT(2020)W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	43	731	7	99	292	59	3	24	253	121	12	13
AMBIENT												
RELATED												
PROJECT												
TOTAL	43	731	7	99	292	59	3	24	253	121	12	13

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 0 1 0	0 1 0 0 1 0 0	1 0 1 0 0 1 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 146 B: 99

EastBound A: 13 B: 121

WestBound A: 253 B: 3

NorthBound A: 246 B: 43

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (246 □ 99 □ 253 □ 121) / □1500 □ 0.409 LOS □ A

Developed by Chun Wong, 12/94

APLIMPAM

CalcaDB

April 26, 2010 ,Monday 03:38:57 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: TAHITI WY I/S No: 5

AM/PM: AM Comments: AMBIENT(2020)W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	6	605	5	87	203	12	20	2	162	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	6	605	5	87	203	12	20	2	162	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 1 0 0	1 0 1 0 1 0 0	0 1 0 0 1 0 0	0 0 0 0 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Split	Auto	□none□	□none□

Critical Movements Diagram

SouthBound A: 108 B: 87

EastBound A: 0 B: 0

WestBound A: 162 B: 20

NorthBound A: 308 B: 6

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (308 □ 87 □ 162 □ 0) / □1500 □ 0.301 LOS □ A

Developed by Chun Wong, 12/94

APLIMPAM

CalcaDB

April 26, 2010 ,Monday 03:38:57 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: BORA BORA WY I/S No: 6

AM/PM: AM Comments: AMBIENT(2020)W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	5	375	10	61	163	10	6	1	165	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	5	375	10	61	163	10	6	1	165	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 1 0 0	1 0 1 0 1 0 0	0 0 0 1 0 0 0	0 0 0 0 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	none	none

Critical Movements Diagram

SouthBound A: 87 B: 61

EastBound A: 0 B: 0

WestBound A: 172 B: 6

NorthBound A: 195 B: 5

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C $= \frac{195 + 61 + 172 + 0}{1200} = 0.357$ LOS A

Developed by Chun Wong, 12/94

APLIMPAM

CalcaDB

April 26, 2010 ,Monday 03:38:57 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: ADMIRALTY WY I/S No: 7

AM/PM: AM Comments: AMB(2020)W/LCP PIPELINE PROJS W/IMPROVEMENT(ALT A)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	37	106	117	173	47	101	56	638	342	228	1029	22
AMBIENT												
RELATED												
PROJECT												
TOTAL	37	106	117	173	47	101	56	638	342	228	1029	22

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 1 0 0	1 1 0 0 0 1 0	1 0 2 0 1 0 0	1 0 1 0 1 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Split	Auto	Split	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 110 B: 110

EastBound A: 526 B: 228

WestBound A: 342 B: 56

NorthBound A: 130 B: 37

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C $= \frac{130 + 110 + 56 + 526}{1425} = 0.507$ LOS A

Developed by Chun Wong, 12/94

APLIMPAM

CalcaDB

April 26, 2010 ,Monday 03:38:57 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: ADMIRALTY WY I/S No: 7

AM/PM: AM Comments: AMB(2020)W/LCP PIPELINE PROJS W/IMPROVEMENT(ALT B)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	37	106	117	173	47	101	56	638	342	228	1029	22
AMBIENT												
RELATED												
PROJECT												
TOTAL	37	106	117	173	47	101	56	638	342	228	1029	22

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 0 1 0	2 0 1 0 0 1 0	1 0 2 0 1 0 0	1 0 1 0 1 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Split	Auto	Split	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 101 B: 95

EastBound A: 526 B: 228

WestBound A: 342 B: 56

NorthBound A: 143 B: 37

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ A(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (143 □ 101 □ 56 □ 526) / □1425 □ 0.510 LOS □ A

Developed by Chun Wong, 12/94

APLIMPAM

CalcaDB

April 26, 2010 ,Monday 03:38:57 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: WASHINGTON BLVD I/S No: 8

AM/PM: AM Comments: AMBIENT(2020)W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	528	1625	196	224	1124	134	183	591	210	169	811	436
AMBIENT												
RELATED												
PROJECT												
TOTAL	528	1625	196	224	1124	134	183	591	210	169	811	436

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 2 0 1 0 0	2 0 2 0 1 0 0	2 0 2 0 0 1 0	2 0 2 0 0 1 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	OLA

Critical Movements Diagram

SouthBound A: 419 B: 123

EastBound A: 406 B: 93

WestBound A: 296 B: 101

NorthBound A: 607 B: 290

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (607 □ 123 □ 101 □ 406) / □1375 □ 0.830 LOS □ D

Developed by Chun Wong, 12/94

APLIMPAM

CalcaDB

April 26, 2010 ,Monday 03:38:57 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: SR-90 ON/OFF RAMPS I/S No: 9

AM/PM: AM Comments: AMBIENT(2020)W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	1862	175	824	1328	0	147	0	797	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	1862	175	824	1328	0	147	0	797	0	0	0

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	0 0 2 0 1 0 0	2 0 3 0 0 0 0	2 0 0 0 0 2 0	0 0 0 0 0 0 0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Perm	Auto	Prot-Fix	none	Split	OLA	none	none

Critical Movements Diagram

	A	B
SouthBound	443	453
EastBound	0	0
WestBound	0	81
NorthBound	679	0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

$$V/C = \frac{679 \quad 453 \quad 81 \quad 0}{1425} \quad 0.781$$

LOS C

Developed by Chun Wong, 12/94

APLIMPAM

CalcaDB

April 26, 2010 ,Monday 03:38:57 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: BALI WY I/S No: 10

AM/PM: AM Comments: AMBIENT(2020)W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	24	930	64	318	1084	19	30	23	248	11	25	13
AMBIENT									-175			
RELATED												
PROJECT												
TOTAL	24	930	64	318	1084	19	30	23	73	11	25	13

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	1 0 1 0 1 0 0	2 0 1 0 1 0 0	1 0 0 0 1 1 0	0 1 0 0 1 0 0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Prot-Fix	Auto	Prot-Fix	Auto	Perm	OLA	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	552	175
EastBound	25	11
WestBound	48	30
NorthBound	497	24

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

$$V/C = \frac{497 \quad 175 \quad 48 \quad 11}{1425} \quad 0.443$$

LOS A

Developed by Chun Wong, 12/94

APLIMPAM

CalcaDB

April 26, 2010 ,Monday 03:38:57 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: BALI WY I/S No: 11

AM/PM: AM Comments: AMBIENT(2020)W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	118	1744	33	28	1263	189	3	0	14	208	2	195
AMBIENT												
RELATED												
PROJECT												
TOTAL	118	1744	33	28	1263	189	3	0	14	208	2	195

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	0 0 0 1 0 0 0	1 1 0 0 0 1 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	Auto	Split	Auto

Critical Movements Diagram

SouthBound A: 484 B: 28

EastBound A: 136 B: 105

WestBound A: 17 B: 3

NorthBound A: 592 B: 118

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (592 □ 28 □ 17 □ 136) / □1375 □ 0.492 LOS □ A

Developed by Chun Wong, 12/94

APLIMPAM

CalcaDB

April 26, 2010 ,Monday 03:38:57 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: MINDANAO WY I/S No: 12

AM/PM: AM Comments: AMBIENT(2020)W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	29	625	52	348	664	51	151	97	486	74	75	27
AMBIENT									-191			
RELATED												
PROJECT												
TOTAL	29	625	52	348	664	51	151	97	295	74	75	27

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	2 0 1 0 1 0 0	1 0 0 1 0 1 0	1 1 0 0 1 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	OLA	Split	Auto

Critical Movements Diagram

SouthBound A: 358 B: 191

EastBound A: 59 B: 59

WestBound A: 196 B: 151

NorthBound A: 339 B: 29

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (339 □ 191 □ 196 □ 59) / □1375 □ 0.501 LOS □ A

Developed by Chun Wong, 12/94

APLIMPAM

CalcaDB

April 26, 2010 ,Monday 03:38:57 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: MINDANAO WY I/S No: 13

AM/PM: AM Comments: AMBIENT(2020)W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	143	1752	323	192	1080	77	209	515	100	0	582	26
AMBIENT												
RELATED												
PROJECT												
TOTAL	143	1752	323	192	1080	77	209	515	100	0	582	26

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	3	0	0	1	0	1	0	2	0	1	0	0	2	0	1	0	1	0	0	0	0	1	0	1	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 386 B: 192

EastBound A: 304 B: 0

WestBound A: 308 B: 115

NorthBound A: 584 B: 143

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

$$V/C = \frac{584 + 192 + 115 + 304}{1375} = 0.799$$

LOS C

Developed by Chun Wong, 12/94

APLIMPAM

CalcaDB

April 26, 2010 ,Monday 03:38:57 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: FIJI WY I/S No: 14

AM/PM: AM Comments: AMBIENT(2020)W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	0	616	0	119	0	111	586	75	143	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	616	0	119	0	111	586	75	143	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	2	0	0	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	none	none	Split	Free	Perm	Free	Perm	none

Critical Movements Diagram

SouthBound A: 0 B: 339

EastBound A: 72 B: 75

WestBound A: 111 B: 0

NorthBound A: 0 B: 0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

$$V/C = \frac{0 + 339 + 111 + 75}{1500} = 0.280$$

LOS A

Developed by Chun Wong, 12/94

APLIMPAM

CalcaDB

April 26, 2010 ,Monday 03:38:57 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: FIJI WY I/S No: 15

AM/PM: AM Comments: AMBIENT(2020)W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	600	1832	35	41	1236	67	16	14	41	130	17	610
AMBIENT												
RELATED												
PROJECT												
TOTAL	600	1832	35	41	1236	67	16	14	41	130	17	610

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	2 0 2 0 1 0 0	1 0 2 0 1 0 0	0 0 0 1 0 0 0	1 0 1 0 0 1 0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Free

Critical Movements Diagram

SouthBound A: 434 B: 41

EastBound A: 17 B: 130

WestBound A: 71 B: 16

NorthBound A: 622 B: 330

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (330 □ 434 □ 71 □ 130) / □1425 □ 0.607 LOS □ B

Developed by Chun Wong, 12/94

APLIMPAM

CalcaDB

April 26, 2010 ,Monday 03:38:57 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 EB ON/OFF RAMPS I/S No: 16

AM/PM: AM Comments: AMBIENT(2020)W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	363	832	413	888	0	0	0	0	9	977	13
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	363	832	413	888	0	0	0	0	9	977	13

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	0 0 1 0 1 1 0	2 0 2 0 0 0 0	0 0 0 0 0 0 0	1 0 1 0 1 0 0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Perm	Auto	Prot-Fix	□none□	□none□	□none□	Split	Auto

Critical Movements Diagram

SouthBound A: 444 B: 227

EastBound A: 495 B: 9

WestBound A: 0 B: 0

NorthBound A: 458 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (458 □ 227 □ 0 □ 495) / □1425 □ 0.758 LOS □ C

Developed by Chun Wong, 12/94

APLIMPAM

CalcaDB

April 26, 2010 ,Monday 03:38:57 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY | W/E: SR-90 WB ON/OFF RAMPS | I/S No: 17

AM/PM: AM | Comments: AMBIENT(2020)W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	12	361	0	0	669	21	632	910	448	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	12	361	0	0	669	21	632	910	448	0	0	0

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	1 0 2 0 0 0 0	0 0 2 0 1 0 0	1 1 1 0 0 1 0	0 0 0 0 0 0 0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Prot-Fix	none	Perm	Auto	Split	Auto	none	none

Critical Movements Diagram

SouthBound A: 230 B: 0

EastBound A: 0 B: 0

WestBound A: 514 B: 514

NorthBound A: 181 B: 12

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) A(E/B)

$V/C = \frac{12 + 230 + 514 + 0}{1425} = 0.461$ LOS A

Developed by Chun Wong, 12/94

APLIMPAM

CalcaDB

April 26, 2010 ,Monday 03:38:57 PM

INTERSECTION DATA SUMMARY SHEET

N/S: CULVER BLVD | W/E: JEFFERSON BLVD | I/S No: 18

AM/PM: AM | Comments: AMBIENT(2020)W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	2469	568	30	391	0	403	0	4	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	2469	568	30	391	0	403	0	4	0	0	0

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	0 0 2 0 0 1 0	0 1 1 0 0 0 0	2 0 0 0 0 1 0	0 0 0 0 0 0 0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Perm	Free	Perm	none	Split	Auto	none	none

Critical Movements Diagram

SouthBound A: 286 B: 30

EastBound A: 0 B: 0

WestBound A: 4 B: 222

NorthBound A: 1235 B: 0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

$V/C = \frac{1235 + 30 + 222 + 0}{1500} = 0.921$ LOS E

Developed by Chun Wong, 12/94

APLIMPAM

CalcaDB

April 26, 2010 ,Monday 03:38:57 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: JEFFERSON BLVD I/S No: 19

AM/PM: AM Comments: AMBIENT(2020)W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	38	1895	584	313	1115	234	346	107	500	160	320	28
AMBIENT												
RELATED												
PROJECT												
TOTAL	38	1895	584	313	1115	234	346	107	500	160	320	28

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	4	0	0	1	0	2	0	3	0	1	0	0	2	0	2	0	0	2	0	1	0	2	0	1	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	Auto

Critical Movements Diagram

	A:	B:
SouthBound	337	172
EastBound	116	160
WestBound	103	190
NorthBound	474	38

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (474 □ 172 □ 190 □ 116) / □1375 □ 0.622 LOS □ B

Developed by Chun Wong, 12/94

APLIMPAM

CalcaDB

April 26, 2010 ,Monday 03:38:57 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: WASHINGTON BLVD I/S No: 20

AM/PM: AM Comments: AMBIENT(2020)W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	277	0	382	0	0	0	216	564	0	0	840	104
AMBIENT												
RELATED												
PROJECT												
TOTAL	277	0	382	0	0	0	216	564	0	0	840	104

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	2	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	2	0	0	1	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	OLA	□none□	□none□	Prot-Fix	□none□	Perm	OLA

Critical Movements Diagram

	A:	B:
SouthBound	0	0
EastBound	420	0
WestBound	282	119
NorthBound	263	152

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ A(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (263 □ 0 □ 119 □ 420) / □1425 □ 0.493 LOS □ A

Developed by Chun Wong, 12/94

PM PEAK HOUR

LEVEL OF SERVICE WORKSHEETS

APLIMPPM

CalcaDB

April 26, 2010 ,Monday 03:44:09 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA / OCEAN AVE W/E: WASHINGTON BLVD I/S No: 1

AM/PM: PM Comments: AMB. (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	313	173	162	132	508	31	143	726	166	31	607	403
AMBIENT												
RELATED												
PROJECT												
TOTAL	313	173	162	132	508	31	143	726	166	31	607	403

LANE							
NORTHBOUND	2	0	1	0	0	1	0
SOUTHBOUND	1	0	0	0	1	0	0
WESTBOUND	1	0	1	0	1	0	0
EASTBOUND	1	0	2	0	0	1	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Split	Auto
SOUTHBOUND	Split	Auto
WESTBOUND	Perm	Auto
EASTBOUND	Perm	Auto

Critical Movements Diagram

SouthBound A: 539 B: 132

EastBound A: 317 B: 31

WestBound A: 446 B: 143

NorthBound A: 173 B: 172

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (173 + 539 + 446 + 31) / 1425 = 0.764 LOS C

Developed by Chun Wong, 12/94

APLIMPPM

CalcaDB

April 26, 2010 ,Monday 03:44:09 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: ADMIRALTY WY I/S No: 2

AM/PM: PM Comments: AMB(2020)W/LCP PIPELINE PRJS W/IMPROVEMENT(ALT A)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	261	763	667	388	0	1005	0	402	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	261	763	667	388	0	1005	0	402	0	0	0

LANE							
NORTHBOUND	0	0	2	0	0	1	0
SOUTHBOUND	2	0	2	0	0	0	0
WESTBOUND	3	0	0	0	0	2	0
EASTBOUND	0	0	0	0	0	0	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Perm	Free
SOUTHBOUND	Prot-Fix	none
WESTBOUND	Split	OLA
EASTBOUND	none	none

Critical Movements Diagram

SouthBound A: 194 B: 367

EastBound A: 0 B: 0

WestBound A: 0 B: 372

NorthBound A: 131 B: 0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (131 + 367 + 372 + 0) / 1425 = 0.541 LOS A

Developed by Chun Wong, 12/94

APLIMPPM

CalcaDB

April 26, 2010 ,Monday 03:44:09 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA | W/E: ADMIRALTY WY | I/S No: 2

AM/PM: PM | Comments: AMB(2020)W/LCP PIPELINE PRJS W/IMPROVEMENT(ALT B)

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	0	667	0	388	0	1005	402	261	763	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	667	0	388	0	1005	402	261	763	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 0 0 0 0	2 0 0 0 0 1 0	0 0 2 0 0 1 0	2 0 2 0 0 0 0
SIGNAL Phasing	□none□	Split	Perm	Prot-Fix
SIGNAL RTOR	□none□	Auto	OLA	□none□

Critical Movements Diagram

	A	B
SouthBound	316	367
EastBound	382	144
WestBound	503	0
NorthBound	0	0

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (0 □ 367 □ 503 □ 144) / □1425 □ 0.642 LOS □ B

Developed by Chun Wong, 12 94

APLIMPPM

CalcaDB

April 26, 2010 ,Monday 03:44:09 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA | W/E: PANAY WY | I/S No: 3

AM/PM: PM | Comments: AMB. (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	1	676	27	210	935	53	15	2	151	53	1	1
AMBIENT												
RELATED												
PROJECT												
TOTAL	1	676	27	210	935	53	15	2	151	53	1	1

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	0 1 0 0 0 1 0	0 0 0 1 0 0 0
SIGNAL Phasing	Perm	Perm	Perm	Perm
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	329	210
EastBound	55	53
WestBound	151	15
NorthBound	234	1

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (234 □ 210 □ 151 □ 53) / □1500 □ 0.362 LOS □ A

Developed by Chun Wong, 12 94

APLIMPPM

CalcaDB

April 26, 2010 ,Monday 03:44:09 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: MARQUESAS WY I/S No: 4

AM/PM: PM Comments: AMB. (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	16	472	12	179	586	95	5	7	119	120	23	38
AMBIENT												
RELATED												
PROJECT												
TOTAL	16	472	12	179	586	95	5	7	119	120	23	38

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	2	0	1	0	0	1	0	2	0	0	1	0	0	1	0	0	1	0	0	1	0	1	0	0	1	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	293	179
EastBound	38	120
WestBound	119	5
NorthBound	161	16

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (161 □ 179 □ 119 □ 120) / □1500 □ 0.316 LOS □ A

Developed by Chun Wong, 12/94

APLIMPPM

CalcaDB

April 26, 2010 ,Monday 03:44:09 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: TAHITI WY I/S No: 5

AM/PM: PM Comments: AMB. (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	2	367	12	131	477	25	6	0	90	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	2	367	12	131	477	25	6	0	90	0	0	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	1	0	0	1	0	0	1	0	1	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Split	Auto	□none□	□none□

Critical Movements Diagram

	A	B
SouthBound	251	131
EastBound	0	0
WestBound	90	6
NorthBound	192	2

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (192 □ 131 □ 90 □ 0) / □1500 □ 0.205 LOS □ A

Developed by Chun Wong, 12/94

APLIMPPM

CalcaDB

April 26, 2010 ,Monday 03:44:09 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: BORA BORA WY I/S No: 6

AM/PM: PM Comments: AMB. (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	3	277	5	160	329	20	1	0	92	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	3	277	5	160	329	20	1	0	92	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 1 0 0	1 0 1 0 1 0 0	0 0 0 1 0 0 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	none	none

Critical Movements Diagram

SouthBound A: 175 B: 160

EastBound A: 0 B: 0

WestBound A: 93 B: 1

NorthBound A: 144 B: 3

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C $\frac{144 + 160 + 93 + 0}{1200}$ 0.331 LOS A

Developed by Chun Wong, 12 94

APLIMPPM

CalcaDB

April 26, 2010 ,Monday 03:44:09 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: ADMIRALTY WY I/S No: 7

AM/PM: PM Comments: AMB(2020)W/LCP PIPELINE PRJS W/IMPROVEMENT(ALT A)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	34	114	119	389	176	219	187	1148	387	166	1192	47
AMBIENT												
RELATED												
PROJECT												
TOTAL	34	114	119	389	176	219	187	1148	387	166	1192	47

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 1 0 0	1 1 0 0 0 1 0	1 0 2 0 1 0 0	1 0 1 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	Auto	Split	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 283 B: 283

EastBound A: 620 B: 166

WestBound A: 512 B: 187

NorthBound A: 151 B: 34

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C $\frac{151 + 283 + 187 + 620}{1425}$ 0.801 LOS D

Developed by Chun Wong, 12 94

APLIMPPM

CalcaDB

April 26, 2010 ,Monday 03:44:09 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: ADMIRALTY WY I/S No: 7

AM/PM: PM Comments: AMB(2020)W/LCP PIPELINE PRJS W/IMPROVEMENT(ALT B)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	34	114	119	389	176	219	187	1148	387	166	1192	47
AMBIENT												
RELATED												
PROJECT												
TOTAL	34	114	119	389	176	219	187	1148	387	166	1192	47

	NB	SB	WB	EB
LANE	0 1 0 0 0 1 0	2 0 1 0 0 1 0	1 0 2 0 1 0 0	1 0 1 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	Auto	Split	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	219	214
EastBound	620	166
WestBound	512	187
NorthBound	148	34

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (148 + 219 + 187 + 620) / 1425 = 0.754 LOS C

Developed by Chun Wong, 12/94

APLIMPPM

CalcaDB

April 26, 2010 ,Monday 03:44:09 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: WASHINGTON BLVD I/S No: 8

AM/PM: PM Comments: AMB. (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	524	1506	290	253	1433	191	283	870	312	138	746	543
AMBIENT												
RELATED												
PROJECT												
TOTAL	524	1506	290	253	1433	191	283	870	312	138	746	543

	NB	SB	WB	EB
LANE	2 0 2 0 1 0 0	2 0 2 0 1 0 0	2 0 2 0 0 1 0	2 0 2 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	OLA

Critical Movements Diagram

	A	B
SouthBound	541	139
EastBound	373	76
WestBound	435	156
NorthBound	599	288

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (288 + 541 + 156 + 373) / 1375 = 0.918 LOS E

Developed by Chun Wong, 12/94

APLIMPPM

CalcaDB

April 26, 2010 ,Monday 03:44:09 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: SR-90 ON/OFF RAMPS I/S No: 9

AM/PM: PM Comments: AMB. (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	1696	211	829	1769	0	164	0	930	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	1696	211	829	1769	0	164	0	930	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 2 0 1 0 0	2 0 3 0 0 0 0	2 0 0 0 0 2 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Prot-Fix	none	Split	OLA	none	none

Critical Movements Diagram

SouthBound A: 590 B: 456

EastBound A: 0 B: 0

WestBound A: 56 B: 90

NorthBound A: 636 B: 0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C $= \frac{636 + 456 + 90 + 0}{1425} = 0.759$ LOS C

Developed by Chun Wong, 12/94

APLIMPPM

CalcaDB

April 26, 2010 ,Monday 03:44:09 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: BALI WY I/S No: 10

AM/PM: PM Comments: AMB. (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	19	1263	200	285	1279	17	70	16	364	19	35	27
AMBIENT									-157			
RELATED												
PROJECT												
TOTAL	19	1263	200	285	1279	17	70	16	207	19	35	27

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	2 0 1 0 1 0 0	1 0 0 0 1 1 0	0 1 0 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	OLA	Perm	Auto

Critical Movements Diagram

SouthBound A: 648 B: 157

EastBound A: 41 B: 19

WestBound A: 112 B: 70

NorthBound A: 732 B: 19

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C $= \frac{732 + 157 + 112 + 19}{1425} = 0.646$ LOS B

Developed by Chun Wong, 12/94

APLIMPPM

CalcaDB

April 26, 2010 ,Monday 03:44:09 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: BALI WY I/S No: 11

AM/PM: PM Comments: AMB. (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	115	1618	16	6	1610	324	5	0	31	347	3	174
AMBIENT												
RELATED												
PROJECT												
TOTAL	115	1618	16	6	1610	324	5	0	31	347	3	174

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	2	0	1	0	0	1	0	2	0	1	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	0

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	Auto	Split	Auto

Critical Movements Diagram

	A:	B:
SouthBound	645	6
EastBound	175	175
WestBound	36	5
NorthBound	545	115

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (115 □ 645 □ 36 □ 175) / □1375 □ 0.636 LOS □ B

Developed by Chun Wong, 12.94

APLIMPPM

CalcaDB

April 26, 2010 ,Monday 03:44:09 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: MINDANAO WY I/S No: 12

AM/PM: PM Comments: AMB. (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	43	923	64	320	1102	109	321	213	587	154	134	30
AMBIENT									-176			
RELATED												
PROJECT												
TOTAL	43	923	64	320	1102	109	321	213	411	154	134	30

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	1	0	1	0	0	2	0	1	0	1	0	0	1	0	0	1	0	1	0	1	1	0	0	1	0	0

	NORTHBOUND		SOUTHBOUND		WESTBOUND		EASTBOUND	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	OLA	Split	Auto

Critical Movements Diagram

	A:	B:
SouthBound	606	176
EastBound	106	106
WestBound	315	315
NorthBound	494	43

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (494 □ 176 □ 315 □ 106) / □1375 □ 0.723 LOS □ C

Developed by Chun Wong, 12.94

APLIMPPM

CalcaDB

April 26, 2010 ,Monday 03:44:09 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: MINDANAO WY I/S No: 13

AM/PM: PM Comments: AMB. (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	144	1583	303	243	1581	110	392	769	94	0	609	103
AMBIENT												
RELATED												
PROJECT												
TOTAL	144	1583	303	243	1581	110	392	769	94	0	609	103

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 3 0 0 1 0	1 0 2 0 1 0 0	2 0 1 0 1 0 0	0 0 1 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 564 B: 243

EastBound A: 356 B: 0

WestBound A: 432 B: 216

NorthBound A: 528 B: 144

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C 528 243 216 356 / 1375 0.907 LOS E

Developed by Chun Wong, 12 94

APLIMPPM

CalcaDB

April 26, 2010 ,Monday 03:44:09 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: FIJI WY I/S No: 14

AM/PM: PM Comments: AMB. (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	0	905	0	137	0	229	501	81	298	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	905	0	137	0	229	501	81	298	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 0 0 0 0	2 0 0 0 0 1 0	0 0 1 0 0 1 0	1 0 2 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	none	none	Split	Free	Perm	Free	Perm	none

Critical Movements Diagram

SouthBound A: 0 B: 498

EastBound A: 149 B: 81

WestBound A: 229 B: 0

NorthBound A: 0 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C 0 498 229 81 / 1500 0.469 LOS A

Developed by Chun Wong, 12 94

APLIMPPM

CalcaDB

April 26, 2010 ,Monday 03:44:09 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD | W/E: FIJI WY | I/S No: 15

AM/PM: PM | Comments: AMB. (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NB LT	NB TH	NB RT	SB LT	SB TH	SB RT	WB LT	WB TH	WB RT	EB LT	EB TH	EB RT
EXISTING	780	1826	24	92	1945	119	42	23	40	137	8	1054
AMBIENT												
RELATED												
PROJECT												
TOTAL	780	1826	24	92	1945	119	42	23	40	137	8	1054

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	2 0 2 0 1 0 0	1 0 2 0 1 0 0	0 0 0 1 0 0 0	1 0 1 0 0 1 0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Free

Critical Movements Diagram

SouthBound A: 688 B: 92

EastBound A: 8 B: 137

WestBound A: 105 B: 42

NorthBound A: 617 B: 429

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (429 + 688 + 105 + 137) / 1425 = 0.884 LOS D

Developed by Chun Wong, 12:94

APLIMPPM

CalcaDB

April 26, 2010 ,Monday 03:44:09 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY | W/E: SR-90 EB ON/OFF RAMPS | I/S No: 16

AM/PM: PM | Comments: AMB. (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NB LT	NB TH	NB RT	SB LT	SB TH	SB RT	WB LT	WB TH	WB RT	EB LT	EB TH	EB RT
EXISTING	0	511	738	783	1122	0	0	0	0	7	989	41
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	511	738	783	1122	0	0	0	0	7	989	41

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	0 0 1 0 1 1 0	2 0 2 0 0 0 0	0 0 0 0 0 0 0	1 0 1 0 1 0 0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Perm	Auto	Prot-Fix	none	none	none	Split	Auto

Critical Movements Diagram

SouthBound A: 561 B: 431

EastBound A: 515 B: 7

WestBound A: 0 B: 0

NorthBound A: 416 B: 0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (416 + 431 + 0 + 515) / 1425 = 0.886 LOS D

Developed by Chun Wong, 12:94

APLIMPPM

CalcaDB

April 26, 2010 ,Monday 03:44:09 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY   W/E: SR-90 WB ON/OFF RAMPS   I/S No: 17

AM/PM: PM   Comments: AMB. (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	18	500	0	0	1162	60	749	1039	453	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	18	500	0	0	1162	60	749	1039	453	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 0 0 0	0 0 2 0 1 0 0	1 1 1 0 0 1 0	0 0 0 0 0 0 0
SIGNAL Phasing	Prot-Fix	Perm	Split	none
SIGNAL RTOR	none	Auto	Auto	none

Critical Movements Diagram

	A	B
SouthBound	407	0
EastBound	0	0
WestBound	596	596
NorthBound	250	18

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C (18 407 596 0) / 1425 0.646   LOS B

Developed by Chun Wong, 12.94

APLIMPPM

CalcaDB

April 26, 2010 ,Monday 03:44:09 PM

INTERSECTION DATA SUMMARY SHEET

N/S: CULVER BLVD   W/E: JEFFERSON BLVD   I/S No: 18

AM/PM: PM   Comments: AMB. (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	918	232	65	1373	0	1264	0	3	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	918	232	65	1373	0	1264	0	3	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 2 0 0 1 0	0 1 1 0 0 0 0	2 0 0 0 0 1 0	0 0 0 0 0 0 0
SIGNAL Phasing	Perm	Perm	Split	none
SIGNAL RTOR	Free	none	Auto	none

Critical Movements Diagram

	A	B
SouthBound	882	65
EastBound	0	0
WestBound	3	695
NorthBound	459	0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C (0 882 695 0) / 1500 0.981   LOS E

Developed by Chun Wong, 12.94

APLIMPPM

CalcaDB

April 26, 2010 ,Monday 03:44:09 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: JEFFERSON BLVD I/S No: 19

AM/PM: PM Comments: AMB. (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	28	1591	257	489	1708	801	528	437	618	38	200	52
AMBIENT												
RELATED												
PROJECT												
TOTAL	28	1591	257	489	1708	801	528	437	618	38	200	52

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 4 0 0 1 0	2 0 3 0 1 0 0	2 0 2 0 0 2 0	1 0 2 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	Auto

Critical Movements Diagram

	A	B
SouthBound	801	269
EastBound	84	38
WestBound	219	290
NorthBound	398	28

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (28 □ 801 □ 290 □ 84) / □1375 □ 0.805 LOS □ D

Developed by Chun Wong, 12/94

APLIMPPM

CalcaDB

April 26, 2010 ,Monday 03:44:09 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: WASHINGTON BLVD I/S No: 20

AM/PM: PM Comments: AMB. (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	287	0	296	0	0	0	474	698	0	0	697	180
AMBIENT												
RELATED												
PROJECT												
TOTAL	287	0	296	0	0	0	474	698	0	0	697	180

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 0 0 0 1 0	0 0 0 0 0 0 0	2 0 2 0 0 0 0	0 0 2 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	OLA	□none□	□none□	Prot-Fix	□none□	Perm	OLA

Critical Movements Diagram

	A	B
SouthBound	0	0
EastBound	349	0
WestBound	349	261
NorthBound	35	158

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

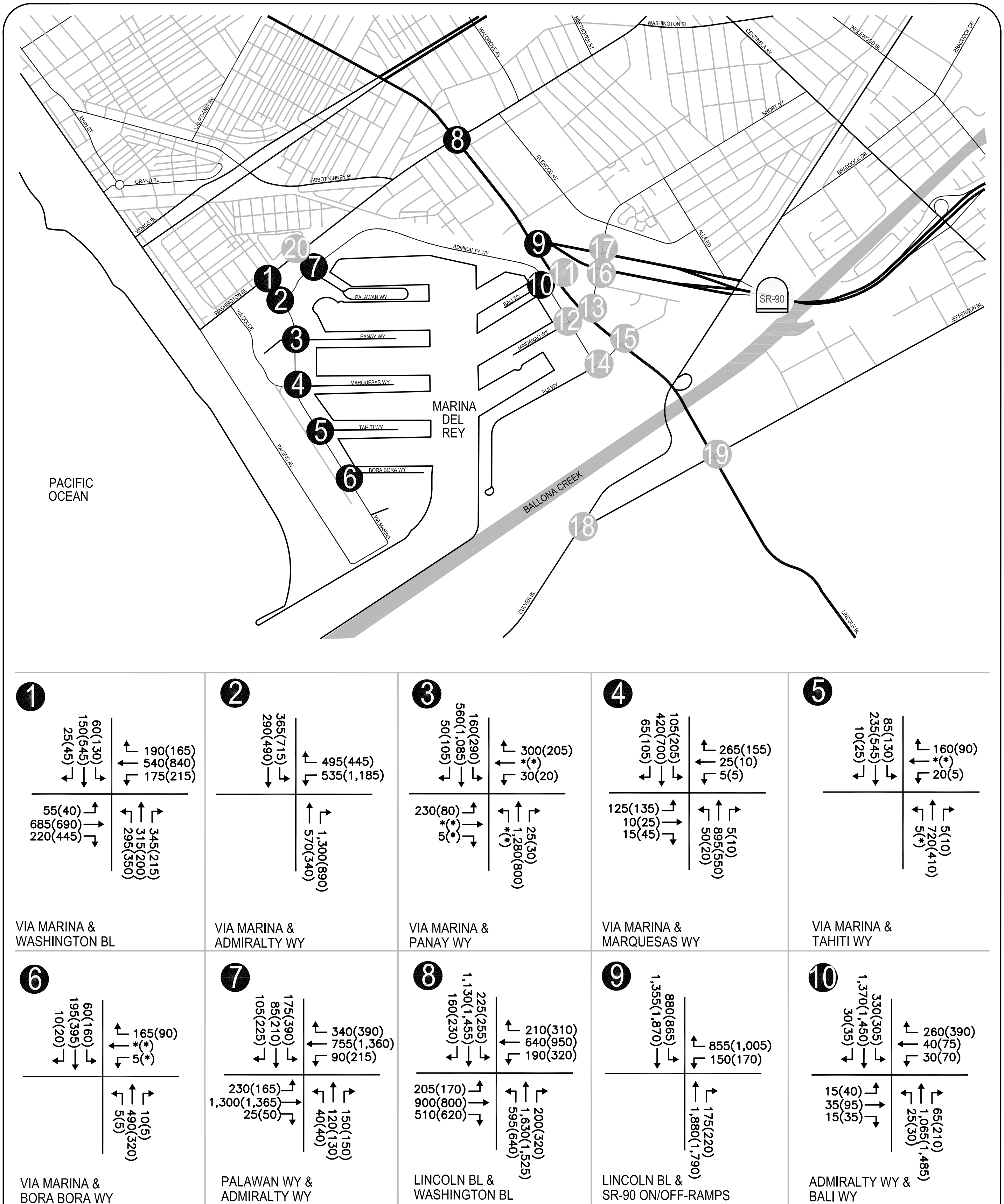
V/C □ (158 □ 0 □ 261 □ 349) / □1425 □ 0.469 LOS □ A

Developed by Chun Wong, 12/94

APPENDIX N

Ambient (2020) Conditions with Proposed LCP Buildout (including Pipeline Projects) and Improvements Traffic Volumes and Level of Service Worksheets

*All signalized intersections include V/C credit of 0.10 to account from ATSAC and ATCS. ATCS credit of 0.03 is not automatically reflected on the capacity calculation worksheets.



LEGEND:

XXX(XXX) - AM(PM) PEAK HOUR TRAFFIC VOLUMES ROUNDED TO THE NEAREST 5 VEHICLES

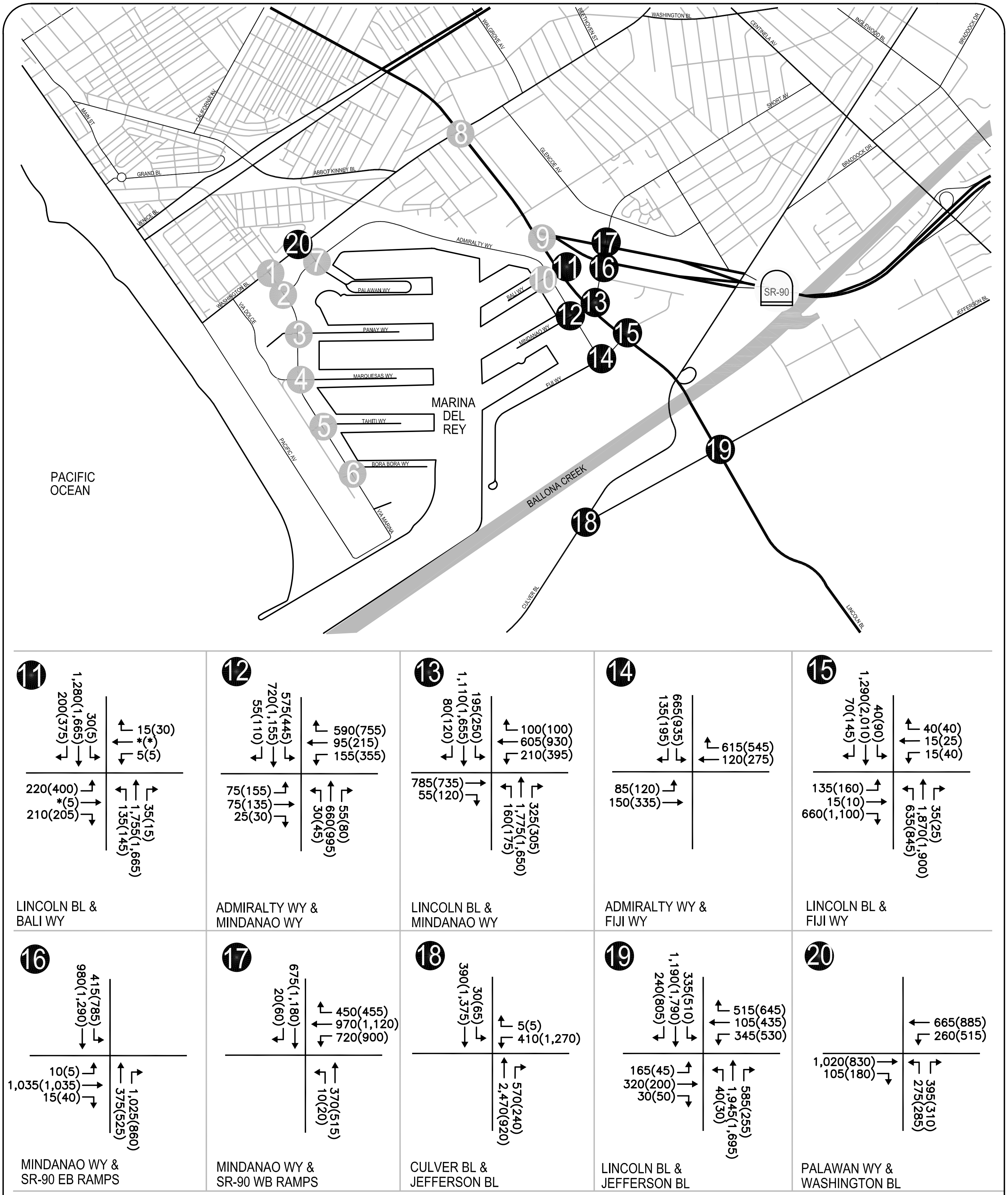
\# - STUDY INTERSECTION

* - NEGLIGIBLE VOLUME

N
Not to scale

APPENDIX N-1
AMBIENT (2020) CONDITIONS WITH PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS) AND IMPROVEMENTS TRAFFIC VOLUMES

RAJU Associates, Inc.



LEGEND:

XXX(XXX) - AM(PM) PEAK HOUR TRAFFIC VOLUMES ROUNDED TO THE NEAREST 5 VEHICLES

\# - STUDY INTERSECTION

* - NEGLIGIBLE VOLUME

N Not to scale

APPENDIX N-2

AMBIENT (2020) CONDITIONS WITH PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS) AND IMPROVEMENTS TRAFFIC VOLUMES

RAJU Associates, Inc.

AM PEAK HOUR

LEVEL OF SERVICE WORKSHEETS

AIMPAM

CalcaDB

April 26, 2010 ,Monday 03:52:17 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA / OCEAN AVE W/E: WASHINGTON BLVD I/S No: 1

AM/PM: AM Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	295	314	346	59	151	25	175	539	192	57	685	220
AMBIENT												
RELATED												
PROJECT												
TOTAL	295	314	346	59	151	25	175	539	192	57	685	220

	NB							SB							WB							EB						
LANE	2	0	1	0	0	1	0	1	0	0	0	1	0	0	1	0	1	0	1	0	0	1	0	2	0	0	1	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	Auto	Split	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A:	B:
SouthBound	176	59
EastBound	343	57
WestBound	366	175
NorthBound	346	162

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) A(S/B)
West/East Critical Movements B(W/B) A(E/B)

$$V/C = \frac{346 + 176 + 175 + 343}{1425} = 0.660$$

LOS B

Developed by Chun Wong, 12/94

AIMPAM

CalcaDB

April 26, 2010 ,Monday 03:52:17 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: ADMIRALTY WY I/S No: 2

AM/PM: AM Comments: AMBIENT(2020)W/PROPOSED LCP BUILDOUT W/IMPT (ALT A)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	571	1302	365	288	0	533	0	493	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	571	1302	365	288	0	533	0	493	0	0	0

	NB							SB							WB							EB						
LANE	0	0	2	0	0	1	0	2	0	2	0	0	0	0	3	0	0	0	0	2	0	0	0	0	0	0	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Free	Prot-Fix	none	Split	OLA	none	none

Critical Movements Diagram

	A:	B:
SouthBound	144	201
EastBound	0	0
WestBound	70	197
NorthBound	286	0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)
West/East Critical Movements B(W/B) A(E/B)

$$V/C = \frac{286 + 201 + 197 + 0}{1425} = 0.410$$

LOS A

Developed by Chun Wong, 12/94

AIMPAM

CalcaDB

April 26, 2010 ,Monday 03:52:17 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: ADMIRALTY WY I/S No: 2

AM/PM: AM Comments: AMBIENT(2020)W/PROPOSED LCP BUILDOUT W/IMPT (ALT B)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	0	365	0	288	0	533	493	571	1302	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	365	0	288	0	533	493	571	1302	0

LANE							
NORTHBOUND	0	0	0	0	0	0	0
SOUTHBOUND	2	0	0	0	0	1	0
WESTBOUND	0	0	2	0	0	1	0
EASTBOUND	2	0	2	0	0	0	0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	none	none	Split	Auto	Perm	OLA	Prot-Fix	none

Critical Movements Diagram

SouthBound A: 131 B: 201

EastBound A: 651 B: 314

WestBound A: 292 B: 0

NorthBound A: 0 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C $\frac{0 \quad 201 \quad 0 \quad 651}{1425}$ 0.528 LOS A

Developed by Chun Wong, 12.94

AIMPAM

CalcaDB

April 26, 2010 ,Monday 03:52:17 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: PANAY WY I/S No: 3

AM/PM: AM Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	1	1282	25	159	559	51	28	0	298	230	1	4
AMBIENT												
RELATED												
PROJECT												
TOTAL	1	1282	25	159	559	51	28	0	298	230	1	4

LANE							
NORTHBOUND	1	0	2	0	1	0	0
SOUTHBOUND	1	0	2	0	1	0	0
WESTBOUND	0	1	0	0	0	1	0
EASTBOUND	0	0	0	1	0	0	0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 203 B: 159

EastBound A: 235 B: 230

WestBound A: 298 B: 28

NorthBound A: 436 B: 1

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C $\frac{436 \quad 159 \quad 298 \quad 230}{1500}$ 0.679 LOS B

Developed by Chun Wong, 12.94

AIMPAM

CalcaDB

April 26, 2010 ,Monday 03:52:17 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: MARQUESAS WY I/S No: 4

AM/PM: AM Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	49	894	7	107	422	67	3	24	267	125	12	15
AMBIENT												
RELATED												
PROJECT												
TOTAL	49	894	7	107	422	67	3	24	267	125	12	15

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 0 1 0	0 1 0 0 1 0 0	1 0 1 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 211 B: 107

EastBound A: 15 B: 125

WestBound A: 267 B: 3

NorthBound A: 300 B: 49

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (300 □ 107 □ 267 □ 125) / □1500 □ 0.463 LOS □ A

Developed by Chun Wong, 12:94

AIMPAM

CalcaDB

April 26, 2010 ,Monday 03:52:17 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: TAHITI WY I/S No: 5

AM/PM: AM Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	6	721	5	87	236	12	20	2	162	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	6	721	5	87	236	12	20	2	162	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 1 0 0	1 0 1 0 1 0 0	0 1 0 0 1 0 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Split	Auto	□none□	□none□

Critical Movements Diagram

SouthBound A: 124 B: 87

EastBound A: 0 B: 0

WestBound A: 162 B: 20

NorthBound A: 366 B: 6

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (366 □ 87 □ 162 □ 0) / □1500 □ 0.340 LOS □ A

Developed by Chun Wong, 12:94

AIMPAM

CalcaDB

April 26, 2010 ,Monday 03:52:17 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: BORA BORA WY I/S No: 6

AM/PM: AM Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	5	491	10	61	196	10	6	1	165	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	5	491	10	61	196	10	6	1	165	0	0	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	1	0	0	1	0	0	1	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	none	none

Critical Movements Diagram

	A	B
SouthBound	103	61
EastBound	0	0
WestBound	172	6
NorthBound	253	5

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (253 + 61 + 172 + 0) / 1200 = 0.405 LOS A

Developed by Chun Wong, 12.94

AIMPAM

CalcaDB

April 26, 2010 ,Monday 03:52:17 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: ADMIRALTY WY I/S No: 7

AM/PM: AM Comments: AMBIENT(2020)W/PROPOSED LCP BUILDOUT W/IMPT (ALT A)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	40	119	152	173	87	104	91	753	342	228	1301	23
AMBIENT												
RELATED												
PROJECT												
TOTAL	40	119	152	173	87	104	91	753	342	228	1301	23

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	1	0	0	1	0	0	1	1	0	0	0	1	0	1	0	2	0	1	0	0	1	0	1	0	1	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	Auto	Split	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	130	130
EastBound	662	228
WestBound	365	91
NorthBound	156	40

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (156 + 130 + 91 + 662) / 1425 = 0.659 LOS B

Developed by Chun Wong, 12.94

AIMPAM

CalcaDB

April 26, 2010 ,Monday 03:52:17 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: ADMIRALTY WY I/S No: 7

AM/PM: AM Comments: AMBIENT(2020)W/PROPOSED LCP BUILDOUT W/IMPT (ALT B)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	40	119	152	173	87	104	91	753	342	228	1301	23
AMBIENT												
RELATED												
PROJECT												
TOTAL	40	119	152	173	87	104	91	753	342	228	1301	23

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	1	0	0	0	1	0	2	0	1	0	0	1	0	1	0	2	0	1	0	0	1	0	1	0	1	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Split	Auto	Split	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 104 B: 95

EastBound A: 662 B: 228

WestBound A: 365 B: 91

NorthBound A: 159 B: 40

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ A(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (159 □ 104 □ 91 □ 662) / □1425 □ 0.643 LOS □ B

Developed by Chun Wong, 12.94

AIMPAM

CalcaDB

April 26, 2010 ,Monday 03:52:17 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: WASHINGTON BLVD I/S No: 8

AM/PM: AM Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	597	1629	201	224	1129	161	190	640	210	206	900	509
AMBIENT												
RELATED												
PROJECT												
TOTAL	597	1629	201	224	1129	161	190	640	210	206	900	509

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	2	0	2	0	1	0	0	2	0	2	0	1	0	0	2	0	2	0	0	1	0	2	0	2	0	0	1	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	OLA

Critical Movements Diagram

SouthBound A: 430 B: 123

EastBound A: 450 B: 113

WestBound A: 320 B: 105

NorthBound A: 610 B: 328

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (328 □ 430 □ 105 □ 450) / □1375 □ 0.885 LOS □ D

Developed by Chun Wong, 12.94

AIMPAM

CalcaDB

April 26, 2010 ,Monday 03:52:17 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: SR-90 ON/OFF RAMPS I/S No: 9

AM/PM: AM Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	1882	176	880	1356	0	149	0	856	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	1882	176	880	1356	0	149	0	856	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 2 0 1 0 0	2 0 3 0 0 0 0	2 0 0 0 0 2 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Prot-Fix	□none□	Split	OLA	□none□	□none□

Critical Movements Diagram

SouthBound A: 452 B: 484

EastBound A: 0 B: 0

WestBound A: 0 B: 82

NorthBound A: 686 B: 0

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (686 □ 484 □ 82 □ 0) / □1425 □ 0.809 LOS □ D

Developed by Chun Wong, 12 94

AIMPAM

CalcaDB

April 26, 2010 ,Monday 03:52:17 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: BALI WY I/S No: 10

AM/PM: AM Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	27	1067	65	332	1369	28	30	39	260	15	36	15
AMBIENT									-183			
RELATED												
PROJECT												
TOTAL	27	1067	65	332	1369	28	30	39	77	15	36	15

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	2 0 1 0 1 0 0	1 0 0 0 1 1 0	0 1 0 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	OLA	Perm	Auto

Critical Movements Diagram

SouthBound A: 699 B: 183

EastBound A: 33 B: 15

WestBound A: 58 B: 30

NorthBound A: 566 B: 27

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (566 □ 183 □ 58 □ 15) / □1425 □ 0.507 LOS □ A

Developed by Chun Wong, 12 94

AIMPAM

CalcaDB

April 26, 2010 ,Monday 03:52:17 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD   W/E: BALI WY   I/S No: 11

AM/PM: AM   Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	134	1754	33	28	1280	201	3	0	14	219	2	209
AMBIENT												
RELATED												
PROJECT												
TOTAL	134	1754	33	28	1280	201	3	0	14	219	2	209

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	0 0 0 1 0 0 0	1 1 0 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	Auto	Split	Auto

Critical Movements Diagram

SouthBound A: 494 B: 28

EastBound A: 142 B: 111

WestBound A: 17 B: 3

NorthBound A: 596 B: 134

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (134 □ 494 □ 17 □ 142) / □1375 □ 0.502   LOS □ A

Developed by Chun Wong, 12.94

AIMPAM

CalcaDB

April 26, 2010 ,Monday 03:52:17 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY   W/E: MINDANAO WY   I/S No: 12

AM/PM: AM   Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	29	660	55	574	720	55	157	97	591	75	75	27
AMBIENT									-316			
RELATED												
PROJECT												
TOTAL	29	660	55	574	720	55	157	97	275	75	75	27

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	2 0 1 0 1 0 0	1 0 0 1 0 1 0	1 1 0 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	OLA	Split	Auto

Critical Movements Diagram

SouthBound A: 388 B: 316

EastBound A: 59 B: 59

WestBound A: 186 B: 157

NorthBound A: 358 B: 29

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (358 □ 316 □ 186 □ 59) / □1375 □ 0.598   LOS □ A

Developed by Chun Wong, 12.94

AIMPAM

CalcaDB

April 26, 2010 ,Monday 03:52:17 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: MINDANAO WY I/S No: 13

AM/PM: AM Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	159	1775	323	193	1109	78	209	607	102	0	783	54
AMBIENT												
RELATED												
PROJECT												
TOTAL	159	1775	323	193	1109	78	209	607	102	0	783	54

	Northbound	Southbound	Westbound	Eastbound
LANE	1 0 3 0 0 1 0	1 0 2 0 1 0 0	2 0 1 0 1 0 0	0 0 1 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	396	193
EastBound	419	0
WestBound	355	115
NorthBound	592	159

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

$$V/C = \frac{592 + 193 + 115 + 419}{1375} = 0.889 \quad LOS\ D$$

Developed by Chun Wong, 12/94

AIMPAM

CalcaDB

April 26, 2010 ,Monday 03:52:17 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: FIJI WY I/S No: 14

AM/PM: AM Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	0	664	0	134	0	119	616	83	149	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	664	0	134	0	119	616	83	149	0

	Northbound	Southbound	Westbound	Eastbound
LANE	0 0 0 0 0 0 0	2 0 0 0 0 1 0	0 0 1 0 0 1 0	1 0 2 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	none	none	Split	Free	Perm	Free	Perm	none

Critical Movements Diagram

	A	B
SouthBound	0	365
EastBound	75	83
WestBound	119	0
NorthBound	0	0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

$$V/C = \frac{0 + 365 + 119 + 83}{1500} = 0.308 \quad LOS\ A$$

Developed by Chun Wong, 12/94

AIMPAM

CalcaDB

April 26, 2010 ,Monday 03:52:17 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: FIJI WY I/S No: 15

AM/PM: AM Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	634	1868	35	41	1289	71	16	14	41	135	17	660
AMBIENT												
RELATED												
PROJECT												
TOTAL	634	1868	35	41	1289	71	16	14	41	135	17	660

	NB							SB							WB							EB						
LANE	2	0	2	0	1	0	0	1	0	2	0	1	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Free

Critical Movements Diagram

SouthBound A: 453 B: 41

EastBound A: 17 B: 135

WestBound A: 71 B: 16

NorthBound A: 634 B: 349

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (349 □ 453 □ 71 □ 135) / □1425 □ 0.637 LOS □ B

Developed by Chun Wong, 12.94

AIMPAM

CalcaDB

April 26, 2010 ,Monday 03:52:17 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 EB ON/OFF RAMPS I/S No: 16

AM/PM: AM Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	374	1023	413	982	0	0	0	0	9	1034	13
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	374	1023	413	982	0	0	0	0	9	1034	13

	NB							SB							WB							EB						
LANE	0	0	1	0	1	1	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Prot-Fix	□none□	□none□	□none□	Split	Auto

Critical Movements Diagram

SouthBound A: 491 B: 227

EastBound A: 524 B: 9

WestBound A: 0 B: 0

NorthBound A: 563 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (563 □ 227 □ 0 □ 524) / □1425 □ 0.852 LOS □ D

Developed by Chun Wong, 12.94

AIMPAM

CalcaDB

April 26, 2010 ,Monday 03:52:17 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 WB ON/OFF RAMPS I/S No: 17

AM/PM: AM Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	12	372	0	0	674	21	721	971	448	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	12	372	0	0	674	21	721	971	448	0	0	0

LANE	NB	SB	WB	EB
	1 0 2 0 0 0 0	0 0 2 0 1 0 0	1 1 1 0 0 1 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	none	Perm	Auto	Split	Auto	none	none

Critical Movements Diagram

	A	B
SouthBound	232	0
EastBound	0	0
WestBound	564	564
NorthBound	186	12

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) A(E/B)

$$V/C = \frac{12 + 232 + 564 + 0}{1425} = 0.497 \qquad LOS = A$$

Developed by Chun Wong, 12/94

AIMPAM

CalcaDB

April 26, 2010 ,Monday 03:52:17 PM

INTERSECTION DATA SUMMARY SHEET

N/S: CULVER BLVD W/E: JEFFERSON BLVD I/S No: 18

AM/PM: AM Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	2469	572	30	391	0	409	0	4	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	2469	572	30	391	0	409	0	4	0	0	0

LANE	NB	SB	WB	EB
	0 0 2 0 0 1 0	0 1 1 0 0 0 0	2 0 0 0 0 1 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Free	Perm	none	Split	Auto	none	none

Critical Movements Diagram

	A	B
SouthBound	286	30
EastBound	0	0
WestBound	4	225
NorthBound	1235	0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

$$V/C = \frac{1235 + 30 + 225 + 0}{1500} = 0.923 \qquad LOS = E$$

Developed by Chun Wong, 12/94

AIMPAM

CalcaDB

April 26, 2010 ,Monday 03:52:17 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: JEFFERSON BLVD I/S No: 19

AM/PM: AM Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	38	1947	584	333	1191	240	346	107	514	164	320	28
AMBIENT												
RELATED												
PROJECT												
TOTAL	38	1947	584	333	1191	240	346	107	514	164	320	28

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 4 0 0 1 0	2 0 3 0 1 0 0	2 0 2 0 0 2 0	1 0 2 0 1 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	Auto

Critical Movements Diagram

	A:	B:
SouthBound	358	183
EastBound	116	164
WestBound	100	190
NorthBound	487	38

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (487 □ 183 □ 190 □ 116) / □1375 □ 0.640 LOS □ B

Developed by Chun Wong, 12.94

AIMPAM

CalcaDB

April 26, 2010 ,Monday 03:52:17 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: WASHINGTON BLVD I/S No: 20

AM/PM: AM Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	277	0	395	0	0	0	258	665	0	0	1022	105
AMBIENT												
RELATED												
PROJECT												
TOTAL	277	0	395	0	0	0	258	665	0	0	1022	105

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 0 0 0 1 0	0 0 0 0 0 0 0	2 0 2 0 0 0 0	0 0 2 0 0 1 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Split	OLA	□none□	□none□	Prot-Fix	□none□	Perm	OLA

Critical Movements Diagram

	A:	B:
SouthBound	0	0
EastBound	511	0
WestBound	333	142
NorthBound	253	152

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ A(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (253 □ 0 □ 142 □ 511) / □1425 □ 0.566 LOS □ A

Developed by Chun Wong, 12.94

PM PEAK HOUR

LEVEL OF SERVICE WORKSHEETS

AIMPPM

CalcaDB

April 26, 2010 ,Monday 04:49:23 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA / OCEAN AVE   W/E: WASHINGTON BLVD   I/S No: 1

AM/PM: PM   Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NB LT	NB TH	NB RT	SB LT	SB TH	SB RT	WB LT	WB TH	WB RT	EB LT	EB TH	EB RT
EXISTING	352	201	216	132	546	47	214	842	166	42	690	445
AMBIENT												
RELATED												
PROJECT												
TOTAL	352	201	216	132	546	47	214	842	166	42	690	445

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	2 0 1 0 0 1 0	1 0 0 0 1 0 0	1 0 1 0 1 0 0	1 0 2 0 0 1 0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Split	Auto	Split	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	593	132
EastBound	348	42
WestBound	504	214
NorthBound	216	194

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (216 + 593 + 214 + 348) / 1425 = 0.892   LOS D

Developed by Chun Wong, 12/94

AIMPPM

CalcaDB

April 26, 2010 ,Monday 04:49:23 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA   W/E: ADMIRALTY WY   I/S No: 2

AM/PM: PM   Comments: AMBIENT(2020)W/PROPOSED LCP BUILDOUT W/IMPT (ALT A)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NB LT	NB TH	NB RT	SB LT	SB TH	SB RT	WB LT	WB TH	WB RT	EB LT	EB TH	EB RT
EXISTING	0	338	891	716	491	0	1187	0	445	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	338	891	716	491	0	1187	0	445	0	0	0

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	0 0 2 0 0 1 0	2 0 2 0 0 0 0	3 0 0 0 0 2 0	0 0 0 0 0 0 0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Perm	Free	Prot-Fix	none	Split	OLA	none	none

Critical Movements Diagram

	A	B
SouthBound	246	394
EastBound	0	0
WestBound	0	439
NorthBound	169	0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (169 + 394 + 439 + 0) / 1425 = 0.633   LOS B

Developed by Chun Wong, 12/94

AIMPPM

CalcaDB

April 26, 2010 ,Monday 04:49:23 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: ADMIRALTY WY I/S No: 2

AM/PM: PM Comments: AMBIENT(2020)W/PROPOSED LCP BUILDOUT W/IMPT (ALT B)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	0	716	0	491	0	1187	445	338	891	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	716	0	491	0	1187	445	338	891	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 0 0 0 0	2 0 0 0 0 1 0	0 0 2 0 0 1 0	2 0 2 0 0 0 0
SIGNAL Phasing	□none□	Split	Perm	Prot-Fix
SIGNAL RTOR	□none□	Auto	OLA	□none□

Critical Movements Diagram

	A	B
SouthBound	398	394
EastBound	446	186
WestBound	594	0
NorthBound	0	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ A(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ $\frac{0 \ □ \ 398 \ □ \ 594 \ □ \ 186}{□1425}$ □ 0.757 LOS □ C

Developed by Chun Wong, 12/94

AIMPPM

CalcaDB

April 26, 2010 ,Monday 04:49:23 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: PANAY WY I/S No: 3

AM/PM: PM Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	2	798	32	292	1084	107	18	2	205	82	1	2
AMBIENT												
RELATED												
PROJECT												
TOTAL	2	798	32	292	1084	107	18	2	205	82	1	2

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	0 1 0 0 0 1 0	0 0 0 1 0 0 0
SIGNAL Phasing	Perm	Perm	Perm	Perm
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	397	292
EastBound	85	82
WestBound	205	18
NorthBound	277	2

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ $\frac{277 \ □ \ 292 \ □ \ 205 \ □ \ 82}{□1500}$ □ 0.501 LOS □ A

Developed by Chun Wong, 12/94

AIMPPM

CalcaDB

April 26, 2010 ,Monday 04:49:23 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: MARQUESAS WY I/S No: 4

AM/PM: PM Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	20	550	12	206	702	106	6	8	154	134	24	43
AMBIENT												
RELATED												
PROJECT												
TOTAL	20	550	12	206	702	106	6	8	154	134	24	43

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 0 1 0	0 1 0 0 1 0 0	1 0 1 0 0 1 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 351 B: 206

EastBound A: 43 B: 134

WestBound A: 154 B: 6

NorthBound A: 187 B: 20

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (187 + 206 + 154 + 134) / 1500 = 0.384 LOS A

Developed by Chun Wong, 12/94

AIMPPM

CalcaDB

April 26, 2010 ,Monday 04:49:23 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: TAHITI WY I/S No: 5

AM/PM: PM Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	2	409	12	131	545	25	6	0	90	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	2	409	12	131	545	25	6	0	90	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 1 0 0	1 0 1 0 1 0 0	0 1 0 0 1 0 0	0 0 0 0 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Split	Auto	none	none

Critical Movements Diagram

SouthBound A: 285 B: 131

EastBound A: 0 B: 0

WestBound A: 90 B: 6

NorthBound A: 213 B: 2

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (213 + 131 + 90 + 0) / 1500 = 0.219 LOS A

Developed by Chun Wong, 12/94

AIMPPM

CalcaDB

April 26, 2010 ,Monday 04:49:23 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: BORA BORA WY I/S No: 6

AM/PM: PM Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	3	319	5	160	397	20	1	0	92	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	3	319	5	160	397	20	1	0	92	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 1 0 0	1 0 1 0 1 0 0	0 0 0 1 0 0 0	0 0 0 0 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	□none□	□none□

Critical Movements Diagram

	A:	B:
SouthBound	209	160
EastBound	0	0
WestBound	93	1
NorthBound	165	3

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (165 □ 160 □ 93 □ 0) / 1200 □ 0.348 LOS □ A

Developed by Chun Wong, 12 94

AIMPPM

CalcaDB

April 26, 2010 ,Monday 04:49:23 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: ADMIRALTY WY I/S No: 7

AM/PM: PM Comments: AMBIENT(2020)W/PROPOSED LCP BUILDOUT W/IMPT (ALT A)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	39	129	152	391	210	225	214	1362	388	166	1363	51
AMBIENT												
RELATED												
PROJECT												
TOTAL	39	129	152	391	210	225	214	1362	388	166	1363	51

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 1 0 0	1 1 0 0 0 1 0	1 0 2 0 1 0 0	1 0 1 0 1 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Split	Auto	Split	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A:	B:
SouthBound	301	301
EastBound	707	166
WestBound	583	214
NorthBound	180	39

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ A(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (180 □ 301 □ 214 □ 707) / □1425 □ 0.914 LOS □ E

Developed by Chun Wong, 12 94

AIMPPM

CalcaDB

April 26, 2010 ,Monday 04:49:23 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: ADMIRALTY WY I/S No: 7

AM/PM: PM Comments: AMBIENT(2020)W/PROPOSED LCP BUILDOUT W/IMPT (ALT B)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	39	129	152	391	210	225	214	1362	388	166	1363	51
AMBIENT												
RELATED												
PROJECT												
TOTAL	39	129	152	391	210	225	214	1362	388	166	1363	51

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	0 1 0 0 0 1 0	2 0 1 0 0 1 0	1 0 2 0 1 0 0	1 0 1 0 1 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Split	Auto	Split	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 225 B: 215

EastBound A: 707 B: 166

WestBound A: 583 B: 214

NorthBound A: 168 B: 39

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (168 + 225 + 214 + 707) / 1425 = 0.852 LOS D

Developed by Chun Wong, 12 94

AIMPPM

CalcaDB

April 26, 2010 ,Monday 04:49:23 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: WASHINGTON BLVD I/S No: 8

AM/PM: PM Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	640	1525	320	253	1457	232	319	949	312	169	802	620
AMBIENT												
RELATED												
PROJECT												
TOTAL	640	1525	320	253	1457	232	319	949	312	169	802	620

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	2 0 2 0 1 0 0	2 0 2 0 1 0 0	2 0 2 0 0 1 0	2 0 2 0 0 1 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	OLA

Critical Movements Diagram

SouthBound A: 563 B: 139

EastBound A: 401 B: 93

WestBound A: 475 B: 175

NorthBound A: 615 B: 352

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (352 + 563 + 175 + 401) / 1375 = 1.014 LOS F

Developed by Chun Wong, 12 94

AIMPPM

CalcaDB

April 26, 2010 ,Monday 04:49:23 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD | W/E: SR-90 ON/OFF RAMPS | I/S No: 9

AM/PM: PM | Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	1788	218	867	1870	0	170	0	1003	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	1788	218	867	1870	0	170	0	1003	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 2 0 1 0 0	2 0 3 0 0 0 0	2 0 0 0 0 2 0	0 0 0 0 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Prot-Fix	□none□	Split	OLA	□none□	□none□

Critical Movements Diagram

	A	B
SouthBound	623	477
EastBound	0	0
WestBound	75	94
NorthBound	669	0

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (669 □ 477 □ 94 □ 0) / □1425 □ 0.800 LOS □ D

Developed by Chun Wong, 12.94

AIMPPM

CalcaDB

April 26, 2010 ,Monday 04:49:23 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY | W/E: BALI WY | I/S No: 10

AM/PM: PM | Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	31	1483	208	303	1452	37	70	74	388	41	97	37
AMBIENT									-167			
RELATED												
PROJECT												
TOTAL	31	1483	208	303	1452	37	70	74	221	41	97	37

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	2 0 1 0 1 0 0	1 0 0 0 1 1 0	0 1 0 0 1 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	OLA	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	745	167
EastBound	88	41
WestBound	148	70
NorthBound	846	31

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (846 □ 167 □ 148 □ 41) / □1425 □ 0.774 LOS □ C

Developed by Chun Wong, 12.94

AIMPPM

CalcaDB

April 26, 2010 ,Monday 04:49:23 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD | W/E: BALI WY | I/S No: 11

AM/PM: PM | Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	147	1663	16	6	1666	375	5	0	31	402	3	206
AMBIENT												
RELATED												
PROJECT												
TOTAL	147	1663	16	6	1666	375	5	0	31	402	3	206

LANE	NB	SB	WB	EB
	1 0 2 0 1 0 0	1 0 2 0 1 0 0	0 0 0 1 0 0 0	1 1 0 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	Auto	Split	Auto

Critical Movements Diagram

	A	B
SouthBound	680	6
EastBound	203	203
WestBound	36	5
NorthBound	560	147

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (147 + 680 + 36 + 203) / 1375 = 0.705 LOS C

Developed by Chun Wong, 12/94

AIMPPM

CalcaDB

April 26, 2010 ,Monday 04:49:23 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY | W/E: MINDANAO WY | I/S No: 12

AM/PM: PM | Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	43	993	80	447	1156	110	355	213	753	156	134	30
AMBIENT									-246			
RELATED												
PROJECT												
TOTAL	43	993	80	447	1156	110	355	213	507	156	134	30

LANE	NB	SB	WB	EB
	1 0 1 0 1 0 0	2 0 1 0 1 0 0	1 0 0 1 0 1 0	1 1 0 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	OLA	Split	Auto

Critical Movements Diagram

	A	B
SouthBound	633	246
EastBound	107	107
WestBound	360	355
NorthBound	537	43

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (537 + 246 + 360 + 107) / 1375 = 0.839 LOS D

Developed by Chun Wong, 12/94

AIMPPM

CalcaDB

April 26, 2010 ,Monday 04:49:23 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: MINDANAO WY I/S No: 13

AM/PM: PM Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	173	1652	306	249	1654	120	393	931	101	0	735	120
AMBIENT												
RELATED												
PROJECT												
TOTAL	173	1652	306	249	1654	120	393	931	101	0	735	120

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	3	0	0	1	0	1	0	2	0	1	0	0	2	0	1	0	1	0	0	0	0	1	0	1	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 591 B: 249

EastBound A: 428 B: 0

WestBound A: 516 B: 216

NorthBound A: 551 B: 173

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (551 + 249 + 216 + 428) / 1375 = 0.980 LOS E

Developed by Chun Wong, 12 94

AIMPPM

CalcaDB

April 26, 2010 ,Monday 04:49:23 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: FIJI WY I/S No: 14

AM/PM: PM Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	0	937	0	194	0	276	546	122	333	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	937	0	194	0	276	546	122	333	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	2	0	0	0	

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	none	none	Split	Free	Perm	Free	Perm	none

Critical Movements Diagram

SouthBound A: 0 B: 515

EastBound A: 167 B: 122

WestBound A: 276 B: 0

NorthBound A: 0 B: 0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (0 + 515 + 276 + 122) / 1500 = 0.539 LOS A

Developed by Chun Wong, 12 94

AIMPPM

CalcaDB

April 26, 2010 ,Monday 04:49:23 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: FIJI WY I/S No: 15

AM/PM: PM Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	845	1902	24	92	2009	146	42	23	40	161	8	1100
AMBIENT												
RELATED												
PROJECT												
TOTAL	845	1902	24	92	2009	146	42	23	40	161	8	1100

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 2 0 1 0 0	1 0 2 0 1 0 0	0 0 0 1 0 0 0	1 0 1 0 0 1 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Free

Critical Movements Diagram

SouthBound A: 718 B: 92

EastBound A: 8 B: 161

WestBound A: 105 B: 42

NorthBound A: 642 B: 465

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C $\frac{465 \quad 718 \quad 105 \quad 161}{1425}$ 0.947 LOS E

Developed by Chun Wong, 12 94

AIMPPM

CalcaDB

April 26, 2010 ,Monday 04:49:23 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 EB ON/OFF RAMPS I/S No: 16

AM/PM: PM Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	524	859	783	1292	0	0	0	0	7	1034	41
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	524	859	783	1292	0	0	0	0	7	1034	41

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 1 0 1 1 0	2 0 2 0 0 0 0	0 0 0 0 0 0 0	1 0 1 0 1 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Prot-Fix	none	none	none	Split	Auto

Critical Movements Diagram

SouthBound A: 646 B: 431

EastBound A: 538 B: 7

WestBound A: 0 B: 0

NorthBound A: 461 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C $\frac{461 \quad 431 \quad 0 \quad 538}{1425}$ 0.934 LOS E

Developed by Chun Wong, 12 94

AIMPPM

CalcaDB

April 26, 2010 ,Monday 04:49:23 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 WB ON/OFF RAMPS I/S No: 17

AM/PM: PM Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	18	513	0	0	1179	60	901	1118	453	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	18	513	0	0	1179	60	901	1118	453	0	0	0

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	1 0 2 0 0 0 0	0 0 2 0 1 0 0	1 1 1 0 0 1 0	0 0 0 0 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	none	Perm	Auto	Split	Auto	none	none

Critical Movements Diagram

	A	B
SouthBound	413	0
EastBound	0	0
WestBound	673	673
NorthBound	257	18

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (18 □ 413 □ 673 □ 0) / □1425 □ 0.705 LOS □ C

Developed by Chun Wong, 12/94

AIMPPM

CalcaDB

April 26, 2010 ,Monday 04:49:23 PM

INTERSECTION DATA SUMMARY SHEET

N/S: CULVER BLVD W/E: JEFFERSON BLVD I/S No: 18

AM/PM: PM Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	918	240	65	1373	0	1269	0	3	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	918	240	65	1373	0	1269	0	3	0	0	0

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	0 0 2 0 0 1 0	0 1 1 0 0 0 0	2 0 0 0 0 1 0	0 0 0 0 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Free	Perm	none	Split	Auto	none	none

Critical Movements Diagram

	A	B
SouthBound	882	65
EastBound	0	0
WestBound	3	698
NorthBound	459	0

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (0 □ 882 □ 698 □ 0) / □1500 □ 0.983 LOS □ E

Developed by Chun Wong, 12/94

AIMPPM

CalcaDB

April 26, 2010 ,Monday 04:49:23 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: JEFFERSON BLVD I/S No: 19

AM/PM: PM Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	28	1696	257	510	1789	806	528	437	647	46	200	52
AMBIENT												
RELATED												
PROJECT												
TOTAL	28	1696	257	510	1789	806	528	437	647	46	200	52

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 4 0 0 1 0	2 0 3 0 1 0 0	2 0 2 0 0 2 0	1 0 2 0 1 0 0
SIGNAL Phasing	Prot-Fix	Prot-Fix	Prot-Fix	Prot-Fix
SIGNAL RTOR	OLA	Auto	OLA	Auto

Critical Movements Diagram

	A	B
SouthBound	806	281
EastBound	84	46
WestBound	219	290
NorthBound	424	28

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (28 □ 806 □ 290 □ 84) / □1375 □ 0.809 LOS □ D

Developed by Chun Wong, 12/94

AIMPPM

CalcaDB

April 26, 2010 ,Monday 04:49:23 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: WASHINGTON BLVD I/S No: 20

AM/PM: PM Comments: AMBIENT(2020) W/PROPOSED LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	287	0	312	0	0	0	513	884	0	0	831	182
AMBIENT												
RELATED												
PROJECT												
TOTAL	287	0	312	0	0	0	513	884	0	0	831	182

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 0 0 0 1 0	0 0 0 0 0 0 0	2 0 2 0 0 0 0	0 0 2 0 0 1 0
SIGNAL Phasing	Split	□none□	Prot-Fix	Perm
SIGNAL RTOR	OLA	□none□	OLA	OLA

Critical Movements Diagram

	A	B
SouthBound	0	0
EastBound	416	0
WestBound	442	282
NorthBound	30	158

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

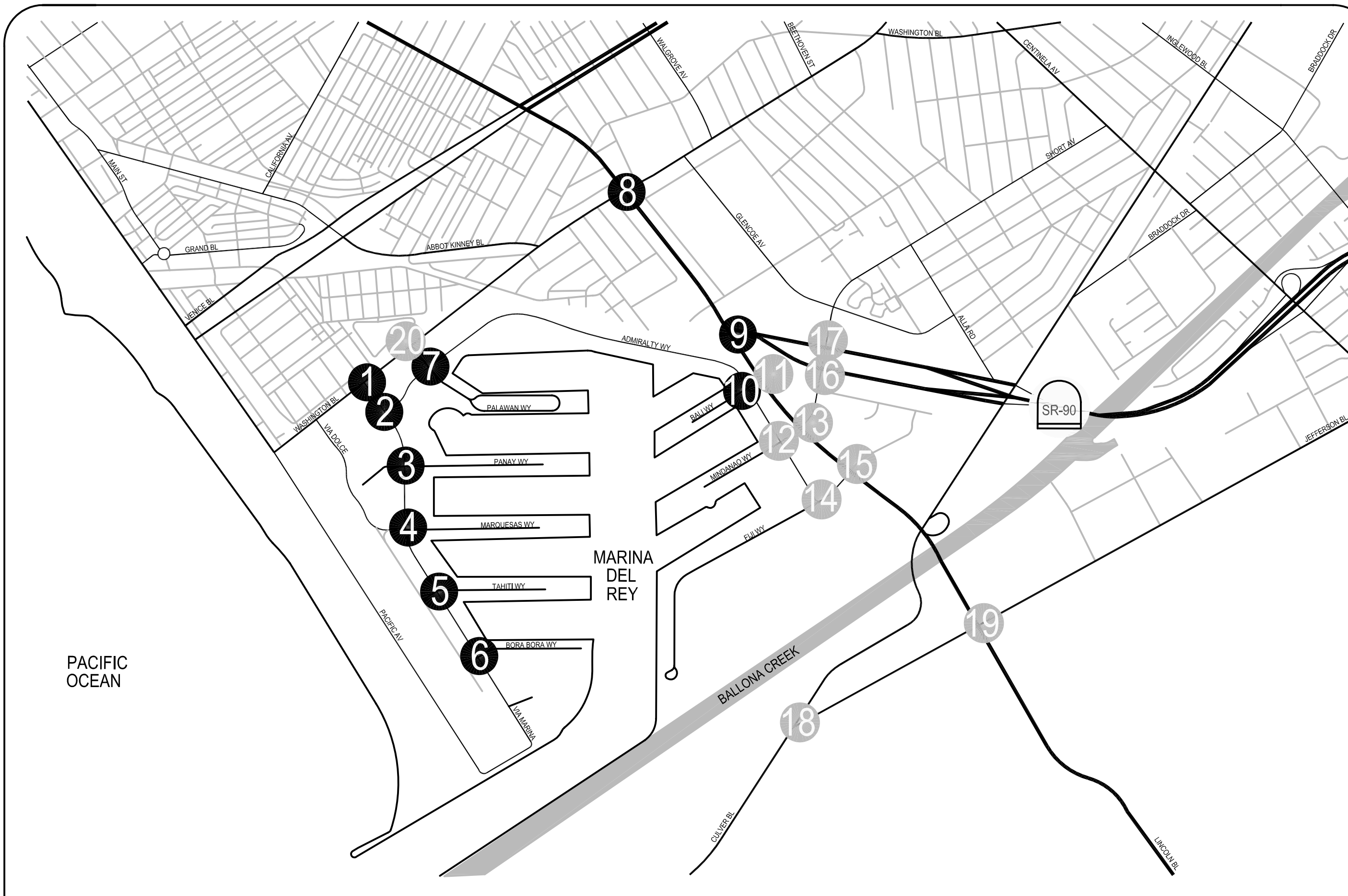
V/C □ (158 □ 0 □ 282 □ 416) / □1425 □ 0.531 LOS □ A

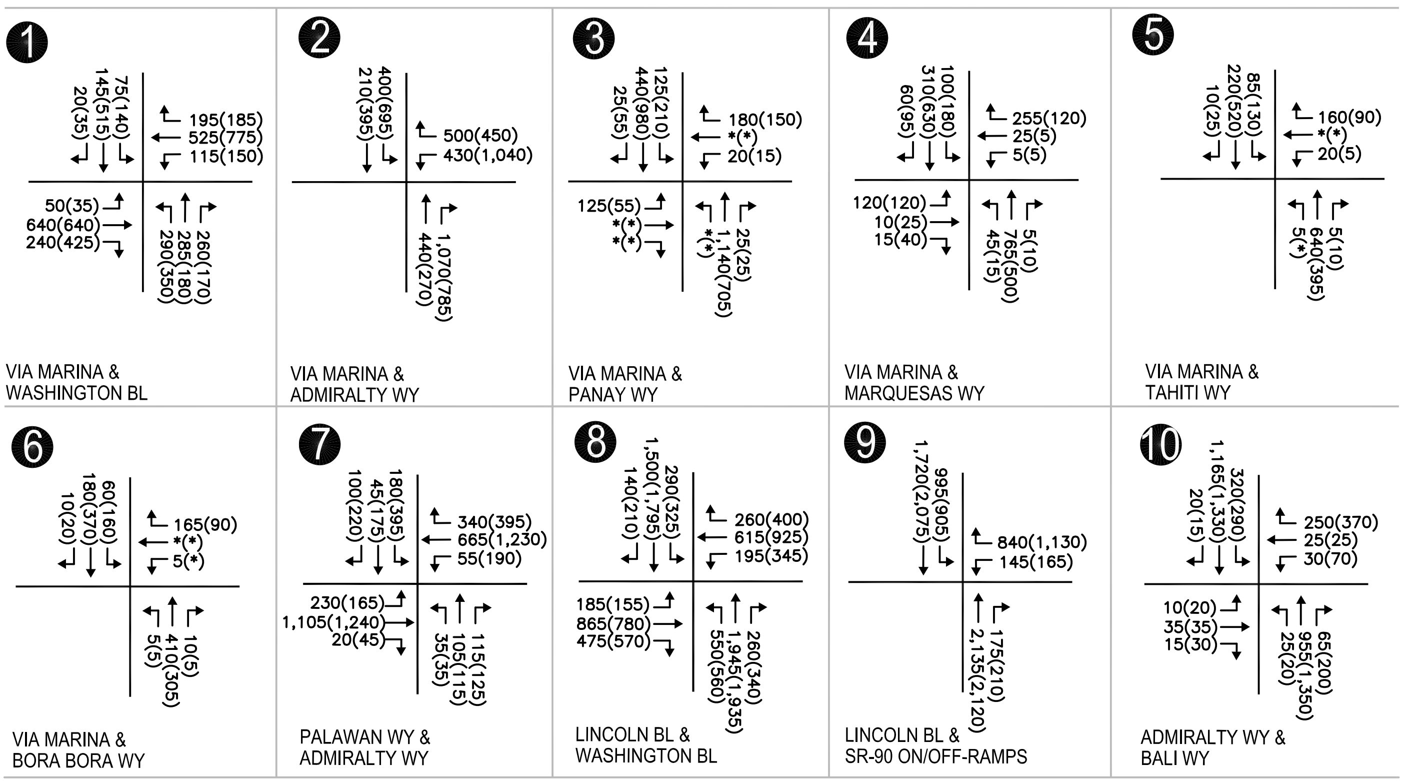
Developed by Chun Wong, 12/94

APPENDIX O

Cumulative (2020) Conditions with Pipeline Projects and Improvements
Traffic Volumes and Level of Service Worksheets

All signalized intersections include V/C credit of 0.10 to account from ATSAC and ATCS. ATCS credit of 0.03 is not automatically reflected on the capacity calculation worksheets.



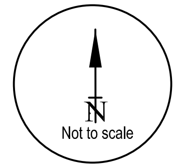


LEGEND:

XXX(XXX) - AM(PM) PEAK HOUR TRAFFIC VOLUMES ROUNDED TO THE NEAREST 5 VEHICLES

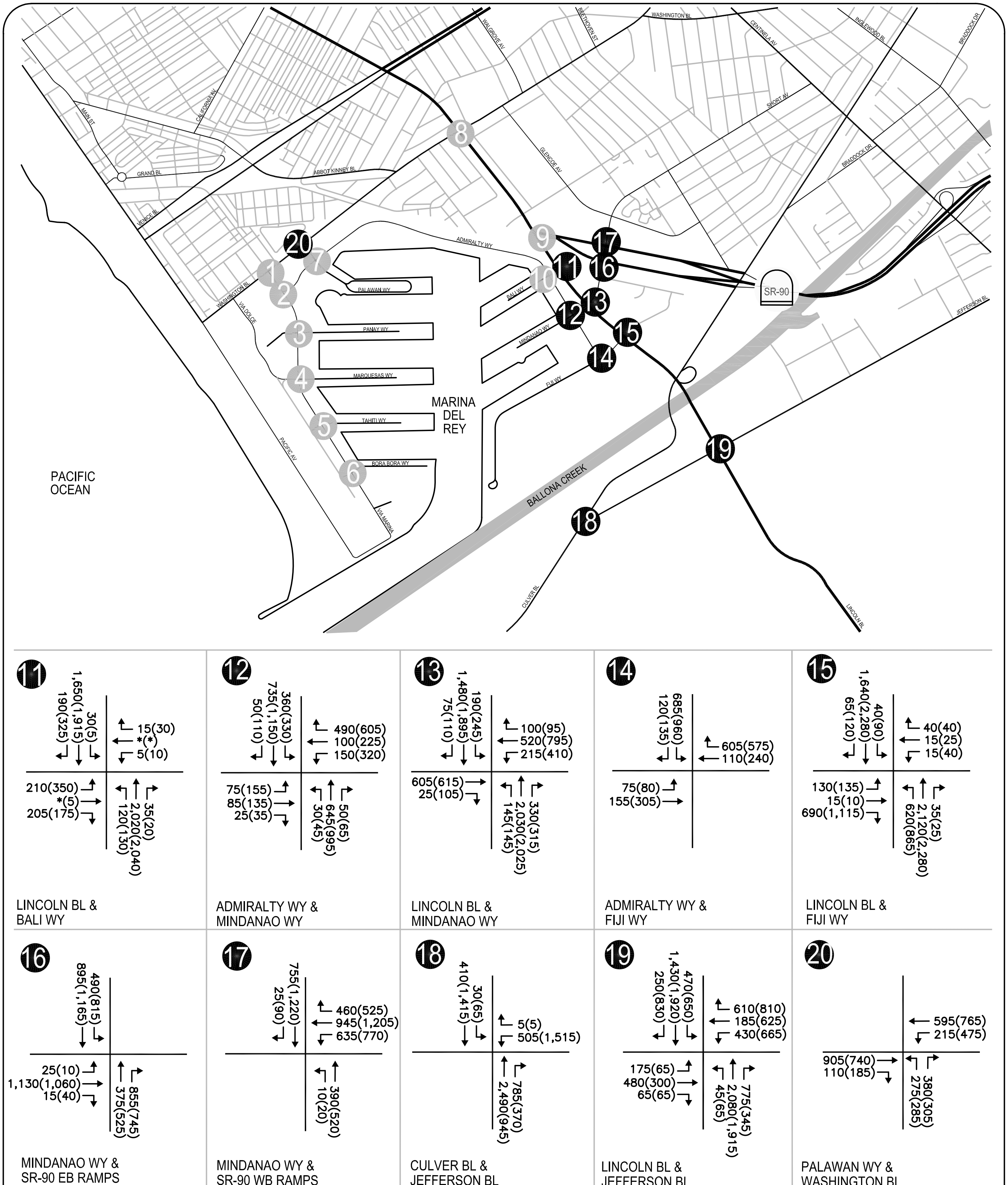
\# - STUDY INTERSECTION

* - NEGLIGIBLE VOLUME



APPENDIX O-1
CUMULATIVE (2020) CONDITIONS WITH PIPELINE PROJECTS AND IMPROVEMENTS TRAFFIC VOLUMES

RAJU Associates, Inc.



LEGEND:

XXX(XXX) - AM(PM) PEAK HOUR TRAFFIC VOLUMES ROUNDED TO THE NEAREST 5 VEHICLES

\# - STUDY INTERSECTION

* - NEGLIGIBLE VOLUME

N
Not to scale

APPENDIX O-2
CUMULATIVE (2020) CONDITIONS WITH PIPELINE PROJECTS AND IMPROVEMENTS TRAFFIC VOLUMES

RAJU Associates, Inc.

AM PEAK HOUR

LEVEL OF SERVICE WORKSHEETS

CPLIMPAM

CalcaDB

April 26, 2010 ,Monday 05:03:54 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA / OCEAN AVE W/E: WASHINGTON BLVD I/S No: 1

AM/PM: AM Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	289	286	258	77	146	22	114	526	196	52	642	242
AMBIENT												
RELATED												
PROJECT												
TOTAL	289	286	258	77	146	22	114	526	196	52	642	242

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	2	0	1	0	0	1	0	1	0	0	0	1	0	0	1	0	1	0	1	0	0	1	0	2	0	0	1	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	Auto	Split	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	168	77
EastBound	321	52
WestBound	361	114
NorthBound	286	159

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ A(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (286 □ 168 □ 114 □ 321) / □1425 □ 0.554 LOS □ A

Developed by Chun Wong, 12 94

CPLIMPAM

CalcaDB

April 26, 2010 ,Monday 05:03:54 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: ADMIRALTY WY I/S No: 2

AM/PM: AM Comments: CUML(2020)W/LCP PIPELINE PROJS W/IMPROVEMENT(ALT A)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	441	1070	400	210	0	432	0	500	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	441	1070	400	210	0	432	0	500	0	0	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	0	2	0	0	1	0	2	0	2	0	0	0	0	3	0	0	0	0	2	0	0	0	0	0	0	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Free	Prot-Fix	□none□	Split	OLA	□none□	□none□

Critical Movements Diagram

	A	B
SouthBound	105	220
EastBound	0	0
WestBound	55	160
NorthBound	221	0

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (221 □ 220 □ 160 □ 0) / □1425 □ 0.352 LOS □ A

Developed by Chun Wong, 12 94

CPLIMPAM

CalcaDB

April 26, 2010 ,Monday 05:03:54 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA | W/E: ADMIRALTY | I/S No: 2

AM/PM: AM | Comments: CUML(2020)W/LCP PIPELINE PROJS W/IMPROVEMENT(ALT B)

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	0	400	0	210	0	432	500	441	1070	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	400	0	210	0	432	500	441	1070	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 0 0 0 0	2 0 0 0 0 1 0	0 0 2 0 0 1 0	2 0 2 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	none	none	Split	Auto	Perm	OLA	Prot-Fix	none

Critical Movements Diagram

	A	B
SouthBound	89	220
EastBound	535	243
WestBound	280	0
NorthBound	0	0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (0 + 220 + 0 + 535) / 1425 = 0.460 LOS A

Developed by Chun Wong, 12/94

CPLIMPAM

CalcaDB

April 26, 2010 ,Monday 05:03:54 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA | W/E: PANAY WY | I/S No: 3

AM/PM: AM | Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	1139	23	124	440	25	20	0	181	127	1	2
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	1139	23	124	440	25	20	0	181	127	1	2

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	0 1 0 0 0 1 0	0 0 0 1 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	155	124
EastBound	130	127
WestBound	181	20
NorthBound	387	0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (387 + 124 + 181 + 127) / 1500 = 0.476 LOS A

Developed by Chun Wong, 12/94

CPLIMPAM

CalcaDB

April 26, 2010 ,Monday 05:03:54 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: MARQUESAS WY I/S No: 4

AM/PM: AM Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	43	767	7	99	308	59	3	24	253	121	12	13
AMBIENT												
RELATED												
PROJECT												
TOTAL	43	767	7	99	308	59	3	24	253	121	12	13

	NB	SB	WB	EB
LANE	1 0 2 0 1 0 0	1 0 2 0 0 1 0	0 1 0 0 1 0 0	1 0 1 0 0 1 0
SIGNAL Phasing	Perm	Perm	Perm	Perm
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	154	99
EastBound	13	121
WestBound	253	3
NorthBound	258	43

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (258 + 99 + 253 + 121) / 1500 = 0.417 LOS A

Developed by Chun Wong, 12 94

CPLIMPAM

CalcaDB

April 26, 2010 ,Monday 05:03:54 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: TAHITI WY I/S No: 5

AM/PM: AM Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	6	641	5	87	219	12	20	2	162	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	6	641	5	87	219	12	20	2	162	0	0	0

	NB	SB	WB	EB
LANE	0 1 0 0 1 0 0	1 0 1 0 1 0 0	0 1 0 0 1 0 0	0 0 0 0 0 0 0
SIGNAL Phasing	Perm	Perm	Split	none
SIGNAL RTOR	Auto	Auto	Auto	none

Critical Movements Diagram

	A	B
SouthBound	116	87
EastBound	0	0
WestBound	162	20
NorthBound	326	6

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (326 + 87 + 162 + 0) / 1500 = 0.313 LOS A

Developed by Chun Wong, 12 94

CPLIMPAM

CalcaDB

April 26, 2010 ,Monday 05:03:54 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: BORA BORA WY I/S No: 6

AM/PM: AM Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	5	411	10	61	179	10	6	1	165	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	5	411	10	61	179	10	6	1	165	0	0	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	1	0	0	1	0	0	1	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	none	none

Critical Movements Diagram

SouthBound A: 95 B: 61

EastBound A: 0 B: 0

WestBound A: 172 B: 6

NorthBound A: 213 B: 5

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (213 + 61 + 172 + 0) / 1200 = 0.372 LOS A

Developed by Chun Wong, 12/94

CPLIMPAM

CalcaDB

April 26, 2010 ,Monday 05:03:54 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: ADMIRALTY WY I/S No: 7

AM/PM: AM Comments: CUML(2020)W/LCP PIPELINE PROJS W/IMPROVEMENT(ALT A)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	37	106	117	178	47	101	56	666	342	228	1106	22
AMBIENT												
RELATED												
PROJECT												
TOTAL	37	106	117	178	47	101	56	666	342	228	1106	22

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	1	0	0	1	0	0	1	1	0	0	0	1	0	1	0	2	0	1	0	0	1	0	1	0	1	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	Auto	Split	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 113 B: 113

EastBound A: 564 B: 228

WestBound A: 342 B: 56

NorthBound A: 130 B: 37

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (130 + 113 + 56 + 564) / 1425 = 0.536 LOS A

Developed by Chun Wong, 12/94

CPLIMPAM

CalcaDB

April 26, 2010 ,Monday 05:03:54 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: ADMIRALTY WY I/S No: 7

AM/PM: AM Comments: CUML(2020)W/LCP PIPELINE PROJS W/IMPROVEMENT(ALT B)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	37	106	117	178	47	101	56	666	342	228	1106	22
AMBIENT												
RELATED												
PROJECT												
TOTAL	37	106	117	178	47	101	56	666	342	228	1106	22

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	1	0	0	0	1	0	2	0	1	0	0	1	0	1	0	2	0	1	0	0	1	0	1	0	1	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Split	Auto	Split	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	101	98
EastBound	564	228
WestBound	342	56
NorthBound	143	37

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (143 + 101 + 56 + 564) / 1425 = 0.536 LOS A

Developed by Chun Wong, 12/94

CPLIMPAM

CalcaDB

April 26, 2010 ,Monday 05:03:54 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: WASHINGTON BLVD I/S No: 8

AM/PM: AM Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	552	1945	261	290	1499	142	195	616	262	184	865	475
AMBIENT												
RELATED												
PROJECT												
TOTAL	552	1945	261	290	1499	142	195	616	262	184	865	475

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	2	0	2	0	1	0	0	2	0	2	0	1	0	0	2	0	2	0	0	1	0	2	0	2	0	0	1	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	OLA

Critical Movements Diagram

	A	B
SouthBound	547	160
EastBound	433	101
WestBound	308	107
NorthBound	735	304

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (735 + 160 + 107 + 433) / 1375 = 0.974 LOS E

Developed by Chun Wong, 12/94

CPLIMPAM

CalcaDB

April 26, 2010 ,Monday 05:03:54 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: SR-90 ON/OFF RAMPS I/S No: 9

AM/PM: AM Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	2137	175	993	1719	0	147	0	840	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	2137	175	993	1719	0	147	0	840	0	0	0

LANE							
NORTHBOUND	0	0	2	0	1	0	0
SOUTHBOUND	2	0	3	0	0	0	0
WESTBOUND	2	0	0	0	0	2	0
EASTBOUND	0	0	0	0	0	0	0

SIGNAL	NORTHBOUND Phasing	NORTHBOUND RTOR	SOUTHBOUND Phasing	SOUTHBOUND RTOR	WESTBOUND Phasing	WESTBOUND RTOR	EASTBOUND Phasing	EASTBOUND RTOR
	Perm	Auto	Prot-Fix	□none□	Split	OLA	□none□	□none□

Critical Movements Diagram

	A	B
SouthBound	573	546
EastBound	0	0
WestBound	0	81
NorthBound	771	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (771 □ 546 □ 81 □ 0) / □1425 □ 0.911 LOS □ E

Developed by Chun Wong, 12/94

CPLIMPAM

CalcaDB

April 26, 2010 ,Monday 05:03:54 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: BALI WY I/S No: 10

AM/PM: AM Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	24	954	64	318	1166	19	30	24	251	11	37	13
AMBIENT									-175			
RELATED												
PROJECT												
TOTAL	24	954	64	318	1166	19	30	24	76	11	37	13

LANE							
NORTHBOUND	1	0	1	0	1	0	0
SOUTHBOUND	2	0	1	0	1	0	0
WESTBOUND	1	0	0	0	1	1	0
EASTBOUND	0	1	0	0	1	0	0

SIGNAL	NORTHBOUND Phasing	NORTHBOUND RTOR	SOUTHBOUND Phasing	SOUTHBOUND RTOR	WESTBOUND Phasing	WESTBOUND RTOR	EASTBOUND Phasing	EASTBOUND RTOR
	Prot-Fix	Auto	Prot-Fix	Auto	Perm	OLA	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	593	175
EastBound	31	11
WestBound	50	30
NorthBound	509	24

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (509 □ 175 □ 30 □ 31) / □1425 □ 0.453 LOS □ A

Developed by Chun Wong, 12/94

CPLIMPAM

CalcaDB

April 26, 2010 ,Monday 05:03:54 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: BALI WY I/S No: 11

AM/PM: AM Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	120	2020	33	28	1651	191	3	0	14	208	2	207
AMBIENT												
RELATED												
PROJECT												
TOTAL	120	2020	33	28	1651	191	3	0	14	208	2	207

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	2	0	1	0	0	1	0	2	0	1	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	Auto	Split	Auto

Critical Movements Diagram

SouthBound A: 614 B: 28

EastBound A: 147 B: 105

WestBound A: 17 B: 3

NorthBound A: 684 B: 120

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (120 □ 614 □ 17 □ 147) / □1375 □ 0.583 LOS □ A

Developed by Chun Wong, 12 94

CPLIMPAM

CalcaDB

April 26, 2010 ,Monday 05:03:54 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: MINDANAO WY I/S No: 12

AM/PM: AM Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	29	645	52	361	734	51	151	98	490	74	87	27
AMBIENT									-199			
RELATED												
PROJECT												
TOTAL	29	645	52	361	734	51	151	98	291	74	87	27

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	1	0	1	0	0	2	0	1	0	1	0	0	1	0	0	1	0	1	0	1	1	0	0	1	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	OLA	Split	Auto

Critical Movements Diagram

SouthBound A: 393 B: 199

EastBound A: 63 B: 63

WestBound A: 195 B: 151

NorthBound A: 349 B: 29

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (349 □ 199 □ 195 □ 63) / □1375 □ 0.516 LOS □ A

Developed by Chun Wong, 12 94

CPLIMPAM

CalcaDB

April 26, 2010 ,Monday 05:03:54 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: MINDANAO WY I/S No: 13

AM/PM: AM Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	144	2030	331	192	1480	77	214	519	100	0	607	26
AMBIENT												
RELATED												
PROJECT												
TOTAL	144	2030	331	192	1480	77	214	519	100	0	607	26

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 3 0 0 1 0	1 0 2 0 1 0 0	2 0 1 0 1 0 0	0 0 1 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	519	192
EastBound	317	0
WestBound	310	118
NorthBound	677	144

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (677 + 192 + 118 + 317) / 1375 = 0.878 LOS D

Developed by Chun Wong, 12/94

CPLIMPAM

CalcaDB

April 26, 2010 ,Monday 05:03:54 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: FIJI WY I/S No: 14

AM/PM: AM Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	0	686	0	119	0	112	606	75	155	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	686	0	119	0	112	606	75	155	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 0 0 0 0	2 0 0 0 0 1 0	0 0 1 0 0 1 0	1 0 2 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	none	none	Split	Free	Perm	Free	Perm	none

Critical Movements Diagram

	A	B
SouthBound	0	377
EastBound	78	75
WestBound	112	0
NorthBound	0	0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (0 + 377 + 112 + 75) / 1500 = 0.306 LOS A

Developed by Chun Wong, 12/94

CPLIMPAM

CalcaDB

April 26, 2010 ,Monday 05:03:54 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: FIJI WY I/S No: 15

AM/PM: AM Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	621	2119	35	41	1642	67	16	14	41	130	17	692
AMBIENT												
RELATED												
PROJECT												
TOTAL	621	2119	35	41	1642	67	16	14	41	130	17	692

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 2 0 1 0 0	1 0 2 0 1 0 0	0 0 0 1 0 0 0	1 0 1 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Free

Critical Movements Diagram

SouthBound A: 570 B: 41

EastBound A: 17 B: 130

WestBound A: 71 B: 16

NorthBound A: 718 B: 342

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (342 + 570 + 71 + 130) / 1425 = 0.711 LOS C

Developed by Chun Wong, 12/94

CPLIMPAM

CalcaDB

April 26, 2010 ,Monday 05:03:54 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 EB ON/OFF RAMPS I/S No: 16

AM/PM: AM Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	374	854	492	897	0	0	0	0	26	1129	13
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	374	854	492	897	0	0	0	0	26	1129	13

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 1 0 1 1 0	2 0 2 0 0 0 0	0 0 0 0 0 0 0	1 0 1 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Prot-Fix	none	none	none	Split	Auto

Critical Movements Diagram

SouthBound A: 449 B: 271

EastBound A: 571 B: 26

WestBound A: 0 B: 0

NorthBound A: 470 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (470 + 271 + 0 + 571) / 1425 = 0.851 LOS D

Developed by Chun Wong, 12/94

CPLIMPAM

CalcaDB

April 26, 2010 ,Monday 05:03:54 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 WB ON/OFF RAMPS I/S No: 17

AM/PM: AM Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	12	389	0	0	753	26	636	947	460	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	12	389	0	0	753	26	636	947	460	0	0	0

LANE	1	0	2	0	0	0	0	0	0	2	0	1	0	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	none	Perm	Auto	Split	Auto	none	none

Critical Movements Diagram

SouthBound A: 260 B: 0

EastBound A: 0 B: 0

WestBound A: 528 B: 528

NorthBound A: 195 B: 12

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C $\frac{12 + 260 + 528 + 0}{1425}$ 0.491 LOS A

Developed by Chun Wong, 12/94

CPLIMPAM

CalcaDB

April 26, 2010 ,Monday 05:03:54 PM

INTERSECTION DATA SUMMARY SHEET

N/S: CULVER BLVD W/E: JEFFERSON BLVD I/S No: 18

AM/PM: AM Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	2491	783	30	408	0	507	0	4	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	2491	783	30	408	0	507	0	4	0	0	0

LANE	0	0	2	0	0	1	0	0	1	1	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Free	Perm	none	Split	Auto	none	none

Critical Movements Diagram

SouthBound A: 294 B: 30

EastBound A: 0 B: 0

WestBound A: 4 B: 279

NorthBound A: 1246 B: 0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C $\frac{1246 + 30 + 279 + 0}{1500}$ 0.967 LOS E

Developed by Chun Wong, 12/94

CPLIMPAM

CalcaDB

April 26, 2010 ,Monday 05:03:54 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: JEFFERSON BLVD I/S No: 19

AM/PM: AM Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	46	2082	773	468	1432	250	428	187	611	177	480	66
AMBIENT												
RELATED												
PROJECT												
TOTAL	46	2082	773	468	1432	250	428	187	611	177	480	66

	NB							SB							WB							EB						
LANE	1	0	4	0	0	1	0	2	0	3	0	1	0	0	2	0	2	0	0	2	0	1	0	2	0	1	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	Auto

Critical Movements Diagram

SouthBound A: 421 B: 257

EastBound A: 182 B: 177

WestBound A: 94 B: 235

NorthBound A: 538 B: 46

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (538 + 257 + 235 + 182) / 1375 = 0.811 LOS D

Developed by Chun Wong, 12/94

CPLIMPAM

CalcaDB

April 26, 2010 ,Monday 05:03:54 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: WASHINGTON BLVD I/S No: 20

AM/PM: AM Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	277	0	382	0	0	0	217	593	0	0	905	108
AMBIENT												
RELATED												
PROJECT												
TOTAL	277	0	382	0	0	0	217	593	0	0	905	108

	NB							SB							WB							EB						
LANE	2	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	2	0	0	1	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	OLA	none	none	Prot-Fix	none	Perm	OLA

Critical Movements Diagram

SouthBound A: 0 B: 0

EastBound A: 453 B: 0

WestBound A: 297 B: 119

NorthBound A: 263 B: 152

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (263 + 0 + 119 + 453) / 1425 = 0.516 LOS A

Developed by Chun Wong, 12/94

PM PEAK HOUR
LEVEL OF SERVICE WORKSHEETS

CPLIMPPM

CalcaDB

April 26, 2010 ,Monday 05:09:50 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA / OCEAN AVE W/E: WASHINGTON BLVD I/S No: 1

AM/PM: PM Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	351	182	170	139	514	34	151	776	183	33	640	425
AMBIENT												
RELATED												
PROJECT												
TOTAL	351	182	170	139	514	34	151	776	183	33	640	425

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 1 0 0 1 0	1 0 0 0 1 0 0	1 0 1 0 1 0 0	1 0 2 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	Auto	Split	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	548	139
EastBound	328	33
WestBound	480	151
NorthBound	182	193

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (193 □ 548 □ 480 □ 33) / □1425 □ 0.810 LOS □ D

Developed by Chun Wong, 12 94

CPLIMPPM

CalcaDB

April 26, 2010 ,Monday 05:09:50 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: ADMIRALTY WY I/S No: 2

AM/PM: PM Comments: CUML(2020)W/LCP PIPELINE PROJS W/IMPROVEMENT(ALT A)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	269	783	694	396	0	1040	0	450	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	269	783	694	396	0	1040	0	450	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 2 0 0 1 0	2 0 2 0 0 0 0	3 0 0 0 0 2 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Free	Prot-Fix	□none□	Split	OLA	□none□	□none□

Critical Movements Diagram

	A	B
SouthBound	198	382
EastBound	0	0
WestBound	0	385
NorthBound	135	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (135 □ 382 □ 385 □ 0) / □1425 □ 0.563 LOS □ A

Developed by Chun Wong, 12 94

CPLIMPPM

CalcaDB

April 26, 2010 ,Monday 05:09:50 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: ADMIRALTY WY I/S No: 2

AM/PM: PM Comments: CUML(2020)W/LCP PIPELINE PROJS W/IMPROVEMENT(ALT B)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	0	694	0	396	0	1040	450	269	783	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	694	0	396	0	1040	450	269	783	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 0 0 0 0	2 0 0 0 0 1 0	0 0 2 0 0 1 0	2 0 2 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	none	none	Split	Auto	Perm	OLA	Prot-Fix	none

Critical Movements Diagram

SouthBound A: 322 B: 382

EastBound A: 392 B: 148

WestBound A: 520 B: 0

NorthBound A: 0 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (0 + 382 + 520 + 148) / 1425 = 0.667 LOS B

Developed by Chun Wong, 12/94

CPLIMPPM

CalcaDB

April 26, 2010 ,Monday 05:09:50 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: PANAY WY I/S No: 3

AM/PM: PM Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	1	704	27	210	978	53	15	2	151	53	1	1
AMBIENT												
RELATED												
PROJECT												
TOTAL	1	704	27	210	978	53	15	2	151	53	1	1

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	0 1 0 0 0 1 0	0 0 0 1 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 344 B: 210

EastBound A: 55 B: 53

WestBound A: 151 B: 15

NorthBound A: 244 B: 1

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (244 + 210 + 151 + 53) / 1500 = 0.369 LOS A

Developed by Chun Wong, 12/94

CPLIMPPM

CalcaDB

April 26, 2010 ,Monday 05:09:50 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: MARQUESAS WY I/S No: 4

AM/PM: PM Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	16	500	12	179	629	95	5	7	119	120	23	38
AMBIENT												
RELATED												
PROJECT												
TOTAL	16	500	12	179	629	95	5	7	119	120	23	38

LANE							
NORTHBOUND	1	0	2	0	1	0	0
SOUTHBOUND	1	0	2	0	0	1	0
WESTBOUND	0	1	0	0	1	0	0
EASTBOUND	1	0	1	0	0	1	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Perm	Auto
SOUTHBOUND	Perm	Auto
WESTBOUND	Perm	Auto
EASTBOUND	Perm	Auto

Critical Movements Diagram

SouthBound A: 315 B: 179

EastBound A: 38 B: 120

WestBound A: 119 B: 5

NorthBound A: 171 B: 16

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (171 + 179 + 119 + 120) / 1500 = 0.323 LOS A

Developed by Chun Wong, 12/94

CPLIMPPM

CalcaDB

April 26, 2010 ,Monday 05:09:50 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: TAHITI WY I/S No: 5

AM/PM: PM Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	2	395	12	131	520	25	6	0	90	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	2	395	12	131	520	25	6	0	90	0	0	0

LANE							
NORTHBOUND	0	1	0	0	1	0	0
SOUTHBOUND	1	0	1	0	1	0	0
WESTBOUND	0	1	0	0	1	0	0
EASTBOUND	0	0	0	0	0	0	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Perm	Auto
SOUTHBOUND	Perm	Auto
WESTBOUND	Split	Auto
EASTBOUND	none	none

Critical Movements Diagram

SouthBound A: 273 B: 131

EastBound A: 0 B: 0

WestBound A: 90 B: 6

NorthBound A: 206 B: 2

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (206 + 131 + 90 + 0) / 1500 = 0.215 LOS A

Developed by Chun Wong, 12/94

CPLIMPPM

CalcaDB

April 26, 2010 ,Monday 05:09:50 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: BORA BORA WY I/S No: 6

AM/PM: PM Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	3	305	5	160	372	20	1	0	92	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	3	305	5	160	372	20	1	0	92	0	0	0

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	0 1 0 0 1 0 0	1 0 1 0 1 0 0	0 0 0 1 0 0 0	0 0 0 0 0 0 0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Perm	Auto	Perm	Auto	Perm	Auto	□none□	□none□

Critical Movements Diagram

SouthBound A: 196 B: 160

EastBound A: 0 B: 0

WestBound A: 93 B: 1

NorthBound A: 158 B: 3

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (158 □ 160 □ 93 □ 0) / 1200 □ 0.343 LOS □ A

Developed by Chun Wong, 12/94

CPLIMPPM

CalcaDB

April 26, 2010 ,Monday 05:09:50 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: ADMIRALTY WY I/S No: 7

AM/PM: PM Comments: CUML(2020)W/LCP PIPELINE PROJS W/IMPROVEMENT(ALT A)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	34	114	123	394	176	219	189	1231	393	166	1239	47
AMBIENT												
RELATED												
PROJECT												
TOTAL	34	114	123	394	176	219	189	1231	393	166	1239	47

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	0 1 0 0 1 0 0	1 1 0 0 0 1 0	1 0 2 0 1 0 0	1 0 1 0 1 0 0

SIGNAL	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
	Split	Auto	Split	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 285 B: 285

EastBound A: 643 B: 166

WestBound A: 541 B: 189

NorthBound A: 153 B: 34

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ A(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (153 □ 285 □ 189 □ 643) / □1425 □ 0.821 LOS □ D

Developed by Chun Wong, 12/94

CPLIMPPM

CalcaDB

April 26, 2010 ,Monday 05:09:50 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: ADMIRALTY WY I/S No: 7

AM/PM: PM Comments: CUML(2020)W/LCP PIPELINE PROJS W/IMPROVEMENT(ALT B)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	TH	RT	SOUTHBOUND LT	TH	RT	WESTBOUND LT	TH	RT	EASTBOUND LT	TH	RT
EXISTING	34	114	123	394	176	219	189	1231	393	166	1239	47
AMBIENT												
RELATED												
PROJECT												
TOTAL	34	114	123	394	176	219	189	1231	393	166	1239	47

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 0 1 0	2 0 1 0 0 1 0	1 0 2 0 1 0 0	1 0 1 0 1 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Split	Auto	Split	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 219 B: 217

EastBound A: 643 B: 166

WestBound A: 541 B: 189

NorthBound A: 148 B: 34

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (148 + 219 + 189 + 643) / 1425 = 0.771 LOS C

Developed by Chun Wong, 12\94

CPLIMPPM

CalcaDB

April 26, 2010 ,Monday 05:09:50 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: WASHINGTON BLVD I/S No: 8

AM/PM: PM Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	TH	RT	SOUTHBOUND LT	TH	RT	WESTBOUND LT	TH	RT	EASTBOUND LT	TH	RT
EXISTING	558	1935	341	323	1795	210	346	927	398	153	780	572
AMBIENT												
RELATED												
PROJECT												
TOTAL	558	1935	341	323	1795	210	346	927	398	153	780	572

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 2 0 1 0 0	2 0 2 0 1 0 0	2 0 2 0 0 1 0	2 0 2 0 0 1 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	OLA

Critical Movements Diagram

SouthBound A: 668 B: 178

EastBound A: 390 B: 84

WestBound A: 464 B: 190

NorthBound A: 759 B: 307

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (307 + 668 + 190 + 390) / 1375 = 1.061 LOS F

Developed by Chun Wong, 12\94

CPLIMPPM

CalcaDB

April 26, 2010 ,Monday 05:09:50 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD | W/E: SR-90 ON/OFF RAMPS | I/S No: 9

AM/PM: PM | Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NB LT	NB TH	NB RT	SB LT	SB TH	SB RT	WB LT	WB TH	WB RT	EB LT	EB TH	EB RT
EXISTING	0	2120	211	904	2075	0	164	0	1129	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	2120	211	904	2075	0	164	0	1129	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 2 0 1 0 0	2 0 3 0 0 0 0	2 0 0 0 0 2 0	0 0 0 0 0 0 0
SIGNAL Phasing	Perm	Prot-Fix	Split	none
SIGNAL RTOR	Auto	none	OLA	none

Critical Movements Diagram

SouthBound A: 692 B: 497

EastBound A: 0 B: 0

WestBound A: 124 B: 90

NorthBound A: 777 B: 0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (777 + 497 + 124 + 0) / 1425 = 0.911 LOS E

Developed by Chun Wong, 12/94

CPLIMPPM

CalcaDB

April 26, 2010 ,Monday 05:09:50 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY | W/E: BALI WY | I/S No: 10

AM/PM: PM | Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NB LT	NB TH	NB RT	SB LT	SB TH	SB RT	WB LT	WB TH	WB RT	EB LT	EB TH	EB RT
EXISTING	22	1350	200	288	1332	17	70	27	368	19	37	32
AMBIENT									-158			
RELATED												
PROJECT												
TOTAL	22	1350	200	288	1332	17	70	27	210	19	37	32

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	2 0 1 0 1 0 0	1 0 0 0 1 1 0	0 1 0 0 1 0 0
SIGNAL Phasing	Prot-Fix	Prot-Fix	Perm	Perm
SIGNAL RTOR	Auto	Auto	OLA	Auto

Critical Movements Diagram

SouthBound A: 675 B: 158

EastBound A: 44 B: 19

WestBound A: 119 B: 70

NorthBound A: 775 B: 22

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (775 + 158 + 119 + 19) / 1425 = 0.682 LOS B

Developed by Chun Wong, 12/94

CPLIMPPM

CalcaDB

April 26, 2010 ,Monday 05:09:50 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: BALI WY I/S No: 11

AM/PM: PM Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	130	2040	20	6	1916	324	12	0	31	349	3	177
AMBIENT												
RELATED												
PROJECT												
TOTAL	130	2040	20	6	1916	324	12	0	31	349	3	177

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	0 0 0 1 0 0 0	1 1 0 0 0 1 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	Auto	Split	Auto

Critical Movements Diagram

SouthBound A: 747 B: 6

EastBound A: 176 B: 176

WestBound A: 43 B: 12

NorthBound A: 687 B: 130

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (130 □ 747 □ 43 □ 176) / □1375 □ 0.727 LOS □ C

Developed by Chun Wong, 12 94

CPLIMPPM

CalcaDB

April 26, 2010 ,Monday 05:09:50 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: MINDANAO WY I/S No: 12

AM/PM: PM Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	43	996	64	328	1151	109	321	223	603	154	136	35
AMBIENT									-180			
RELATED												
PROJECT												
TOTAL	43	996	64	328	1151	109	321	223	423	154	136	35

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	2 0 1 0 1 0 0	1 0 0 1 0 1 0	1 1 0 0 1 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	OLA	Split	Auto

Critical Movements Diagram

SouthBound A: 630 B: 180

EastBound A: 108 B: 108

WestBound A: 323 B: 321

NorthBound A: 530 B: 43

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (530 □ 180 □ 323 □ 108) / □1375 □ 0.760 LOS □ C

Developed by Chun Wong, 12 94

CPLIMPPM

CalcaDB

April 26, 2010 ,Monday 05:09:50 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: MINDANAO WY I/S No: 13

AM/PM: PM Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	146	2024	314	243	1897	110	411	793	94	0	617	105
AMBIENT												
RELATED												
PROJECT												
TOTAL	146	2024	314	243	1897	110	411	793	94	0	617	105

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 3 0 0 1 0	1 0 2 0 1 0 0	2 0 1 0 1 0 0	0 0 1 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 669 B: 243

EastBound A: 361 B: 0

WestBound A: 444 B: 226

NorthBound A: 675 B: 146

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (675 □ 243 □ 226 □ 361) / □1375 □ 1.025 LOS □ F

Developed by Chun Wong, 12/94

CPLIMPPM

CalcaDB

April 26, 2010 ,Monday 05:09:50 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: FIJI WY I/S No: 14

AM/PM: PM Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	0	959	0	137	0	239	574	81	305	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	959	0	137	0	239	574	81	305	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 0 0 0 0	2 0 0 0 0 1 0	0 0 1 0 0 1 0	1 0 2 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	□none□	□none□	Split	Free	Perm	Free	Perm	□none□

Critical Movements Diagram

SouthBound A: 0 B: 527

EastBound A: 153 B: 81

WestBound A: 239 B: 0

NorthBound A: 0 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (0 □ 527 □ 239 □ 81) / □1500 □ 0.495 LOS □ A

Developed by Chun Wong, 12/94

CPLIMPPM

CalcaDB

April 26, 2010 ,Monday 05:09:50 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: FIJI WY I/S No: 15

AM/PM: PM Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	863	2281	24	92	2281	119	42	23	40	137	8	1116
AMBIENT												
RELATED												
PROJECT												
TOTAL	863	2281	24	92	2281	119	42	23	40	137	8	1116

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 2 0 1 0 0	1 0 2 0 1 0 0	0 0 0 1 0 0 0	1 0 1 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Free

Critical Movements Diagram

SouthBound A: 800 B: 92

EastBound A: 8 B: 137

WestBound A: 105 B: 42

NorthBound A: 768 B: 475

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (475 □ 800 □ 105 □ 137) / □1425 □ 0.995 LOS □ E

Developed by Chun Wong, 12'94

CPLIMPPM

CalcaDB

April 26, 2010 ,Monday 05:09:50 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 EB ON/OFF RAMPS I/S No: 16

AM/PM: PM Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	523	746	817	1165	0	0	0	0	12	1059	41
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	523	746	817	1165	0	0	0	0	12	1059	41

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 1 0 1 1 0	2 0 2 0 0 0 0	0 0 0 0 0 0 0	1 0 1 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Prot-Fix	□none□	□none□	□none□	Split	Auto

Critical Movements Diagram

SouthBound A: 583 B: 449

EastBound A: 550 B: 12

WestBound A: 0 B: 0

NorthBound A: 423 B: 0

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (423 □ 449 □ 0 □ 550) / □1425 □ 0.928 LOS □ E

Developed by Chun Wong, 12'94

CPLIMPPM

CalcaDB

April 26, 2010 ,Monday 05:09:50 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 WB ON/OFF RAMPS I/S No: 17

AM/PM: PM Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	18	518	0	0	1218	91	770	1207	525	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	18	518	0	0	1218	91	770	1207	525	0	0	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	2	0	0	0	0	0	0	2	0	1	0	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	none	Perm	Auto	Split	Auto	none	none

Critical Movements Diagram

	A	B
SouthBound	436	0
EastBound	0	0
WestBound	659	659
NorthBound	259	18

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (18 + 436 + 659 + 0) / 1425 = 0.711 LOS C

Developed by Chun Wong, 12/94

CPLIMPPM

CalcaDB

April 26, 2010 ,Monday 05:09:50 PM

INTERSECTION DATA SUMMARY SHEET

N/S: CULVER BLVD W/E: JEFFERSON BLVD I/S No: 18

AM/PM: PM Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	947	371	65	1417	0	1516	0	3	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	947	371	65	1417	0	1516	0	3	0	0	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	0	2	0	0	1	0	0	1	1	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Free	Perm	none	Split	Auto	none	none

Critical Movements Diagram

	A	B
SouthBound	904	65
EastBound	0	0
WestBound	3	834
NorthBound	474	0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (0 + 904 + 834 + 0) / 1500 = 1.089 LOS F

Developed by Chun Wong, 12/94

CPLIMPPM

CalcaDB

April 26, 2010 ,Monday 05:09:50 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: JEFFERSON BLVD I/S No: 19

AM/PM: PM Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	TH	RT	SOUTHBOUND LT	TH	RT	WESTBOUND LT	TH	RT	EASTBOUND LT	TH	RT
EXISTING	66	1917	346	650	1918	828	666	624	809	64	299	66
AMBIENT												
RELATED												
PROJECT												
TOTAL	66	1917	346	650	1918	828	666	624	809	64	299	66

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 4 0 0 1 0	2 0 3 0 1 0 0	2 0 2 0 0 2 0	1 0 2 0 1 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	Auto

Critical Movements Diagram

SouthBound A: 828 B: 358

EastBound A: 122 B: 64

WestBound A: 312 B: 366

NorthBound A: 479 B: 66

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

$$V/C = \frac{66 + 828 + 366 + 122}{1375} = 0.935$$

LOS E

Developed by Chun Wong, 12 94

CPLIMPPM

CalcaDB

April 26, 2010 ,Monday 05:09:50 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: WASHINGTON BLVD I/S No: 20

AM/PM: PM Comments: CUMULATIVE (2020) W/LCP PIPELINE PROJECTS W/IMPROVEMEN

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	TH	RT	SOUTHBOUND LT	TH	RT	WESTBOUND LT	TH	RT	EASTBOUND LT	TH	RT
EXISTING	287	0	303	0	0	0	474	767	0	0	741	185
AMBIENT												
RELATED												
PROJECT												
TOTAL	287	0	303	0	0	0	474	767	0	0	741	185

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 0 0 0 1 0	0 0 0 0 0 0 0	2 0 2 0 0 0 0	0 0 2 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	OLA	none	none	Prot-Fix	none	Perm	OLA

Critical Movements Diagram

SouthBound A: 0 B: 0

EastBound A: 371 B: 0

WestBound A: 384 B: 261

NorthBound A: 42 B: 158

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

$$V/C = \frac{158 + 0 + 261 + 371}{1425} = 0.484$$

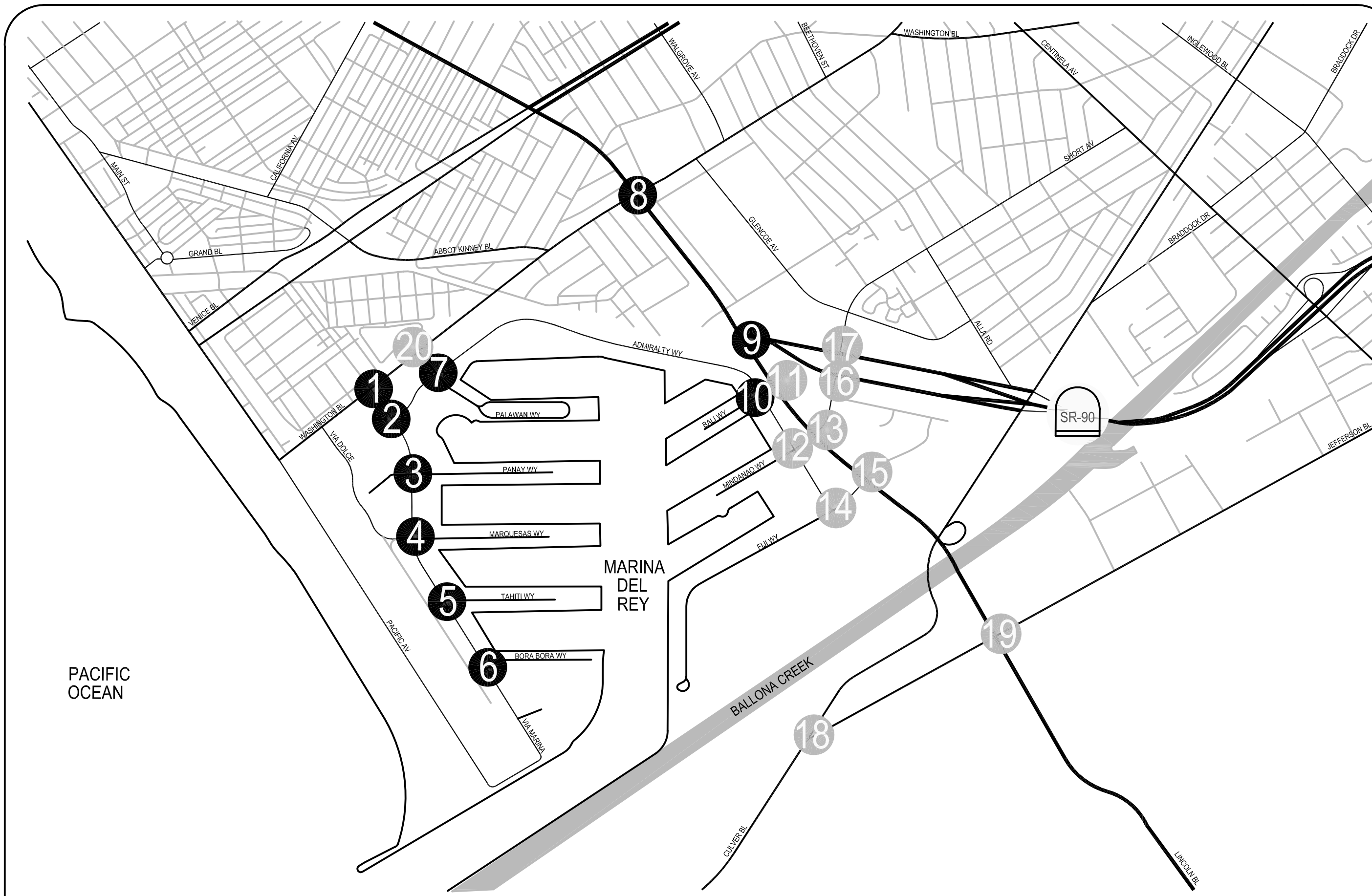
LOS A

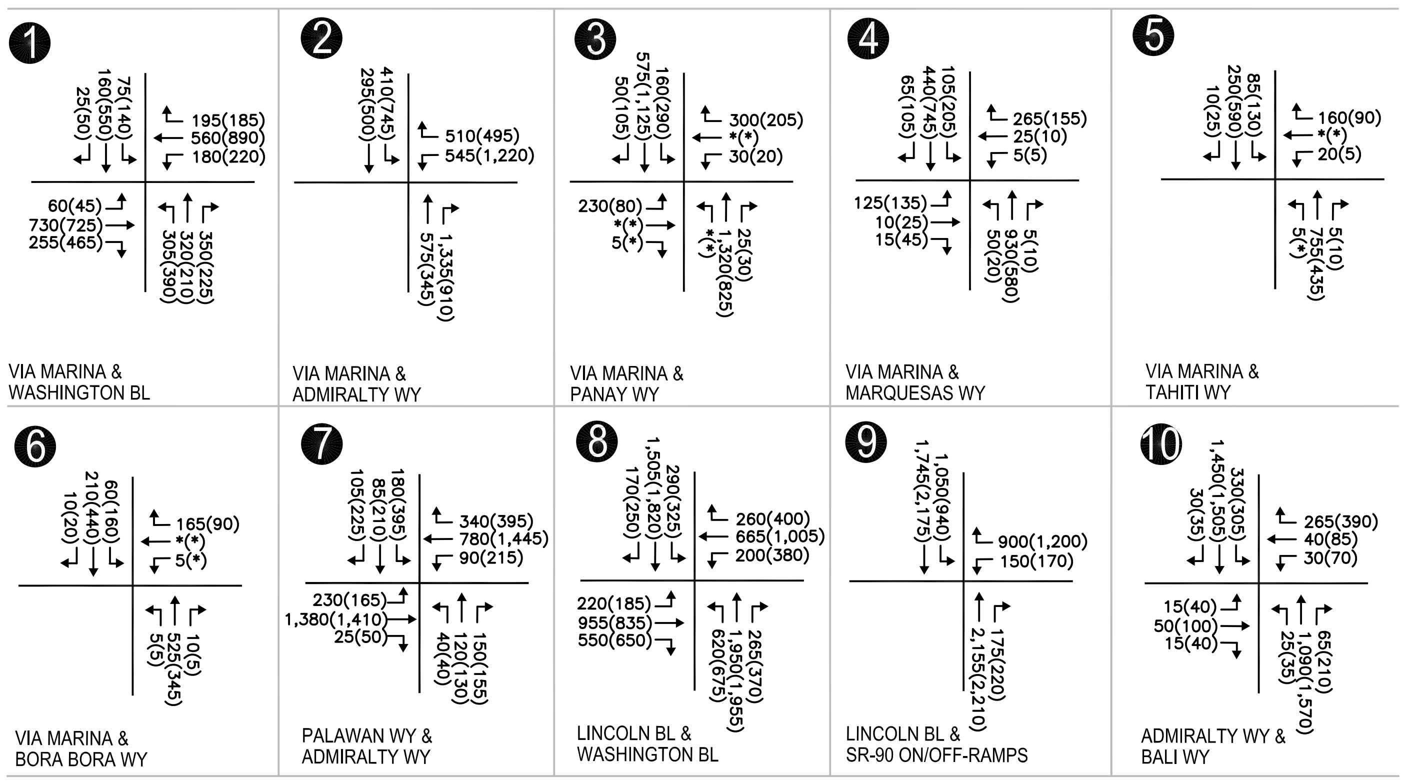
Developed by Chun Wong, 12 94

APPENDIX P

Cumulative (2020) Conditions with Proposed LCP Buildout (including Pipeline Projects) and Improvements Traffic Volumes and Level of Service Worksheets

All signalized intersections include V/C credit of 0.10 to account from ATSAC and ATCS. ATCS credit of 0.03 is not automatically reflected on the capacity calculation worksheets.



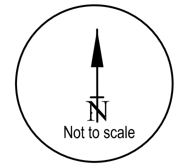


LEGEND:

XXX(XXX) - AM(PM) PEAK HOUR TRAFFIC VOLUMES ROUNDED TO THE NEAREST 5 VEHICLES

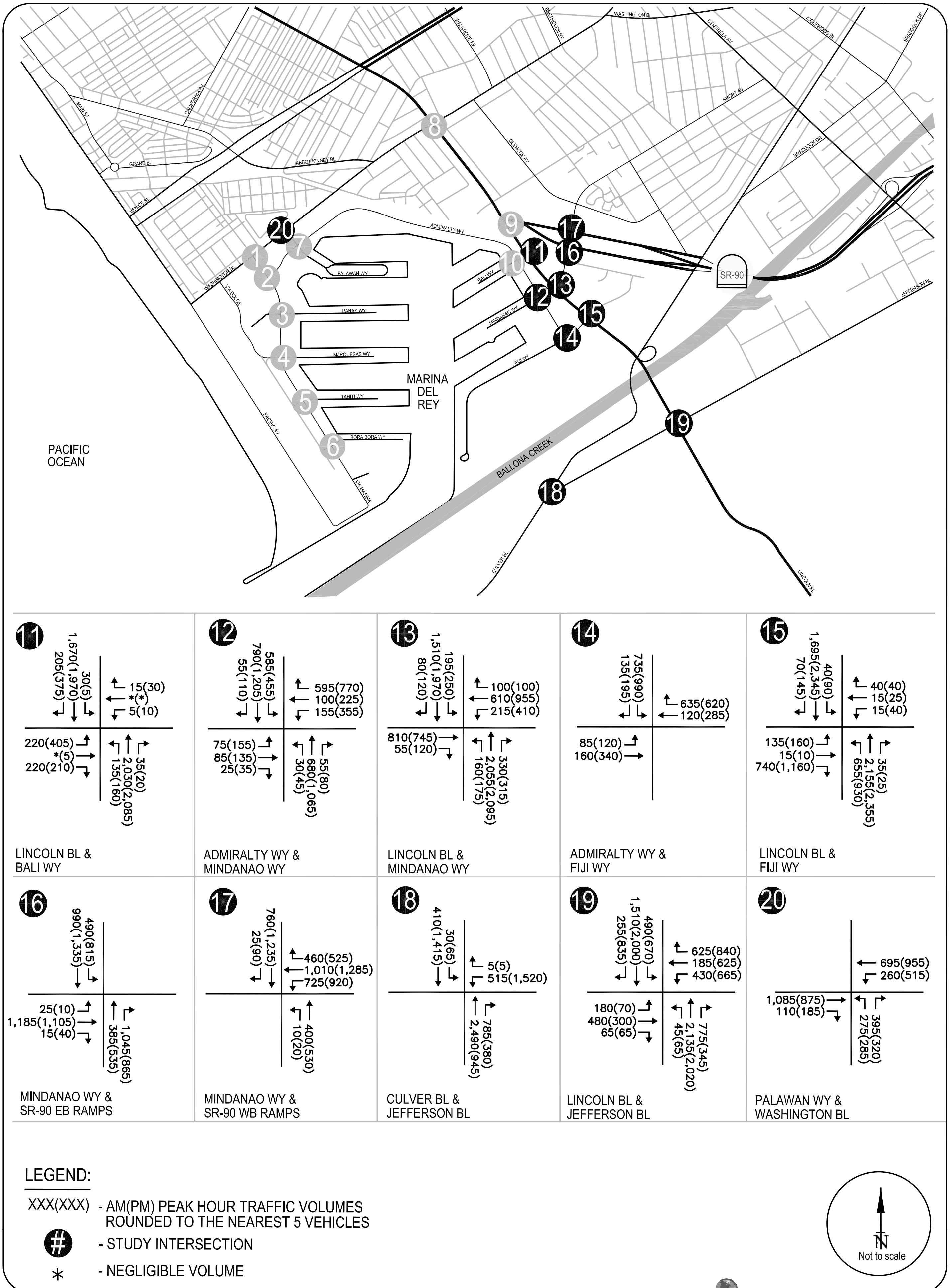
\# - STUDY INTERSECTION

* - NEGLIGIBLE VOLUME



APPENDIX P-1
CUMULATIVE (2020) CONDITIONS WITH PROPOSED LCP BUILDOUT (INCLUDING PIPELINE PROJECTS) AND IMPROVEMENTS TRAFFIC VOLUMES

RAJU Associates, Inc.



APPENDIX P-2
CUMULATIVE (2020) CONDITIONS WITH PROPOSED LCP BUILDOUT
(INCLUDING PIPELINE PROJECTS) AND IMPROVEMENTS TRAFFIC VOLUMES

RAJU Associates, Inc.

AM PEAK HOUR

LEVEL OF SERVICE WORKSHEETS

CIMPAM

CalcaDB

April 26, 2010 ,Monday 05:14:18 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA / OCEAN AVE W/E: WASHINGTON BLVD I/S No: 1

AM/PM: AM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	305	321	351	77	161	26	181	559	196	60	732	255
AMBIENT												
RELATED												
PROJECT												
TOTAL	305	321	351	77	161	26	181	559	196	60	732	255

	NB							SB							WB							EB						
LANE	2	0	1	0	0	1	0	1	0	0	0	1	0	0	1	0	1	0	1	0	0	1	0	2	0	0	1	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Split	Auto	Split	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	187	77
EastBound	366	60
WestBound	378	181
NorthBound	351	168

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (351 + 187 + 181 + 366) / 1425 = 0.691 LOS B

Developed by Chun Wong, 12/94

CIMPAM

CalcaDB

April 26, 2010 ,Monday 05:14:18 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: ADMIRALTY WY I/S No: 2

AM/PM: AM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPT(ALT A)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	576	1333	411	294	0	544	0	510	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	576	1333	411	294	0	544	0	510	0	0	0

	NB							SB							WB							EB						
LANE	0	0	2	0	0	1	0	2	0	2	0	0	0	0	3	0	0	0	0	2	0	0	0	0	0	0	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Free	Prot-Fix	none	Split	OLA	none	none

Critical Movements Diagram

	A	B
SouthBound	147	226
EastBound	0	0
WestBound	54	201
NorthBound	288	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (288 + 226 + 201 + 0) / 1425 = 0.432 LOS A

Developed by Chun Wong, 12/94

CIMPAM

CalcaDB

April 26, 2010 ,Monday 05:14:18 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA | W/E: ADMIRALTY WY | I/S No: 2

AM/PM: AM | Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPT(ALT B)

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	0	411	0	294	0	544	510	576	1333	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	411	0	294	0	544	510	576	1333	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 0 0 0 0	2 0 0 0 0 1 0	0 0 2 0 0 1 0	2 0 2 0 0 0 0
SIGNAL Phasing	none	Split	Perm	Prot-Fix
SIGNAL RTOR	none	Auto	OLA	none

Critical Movements Diagram

SouthBound A: 136 B: 226

EastBound A: 667 B: 317

WestBound A: 284 B: 0

NorthBound A: 0 B: 0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (0 + 226 + 0 + 667) / 1425 = 0.557 LOS A

Developed by Chun Wong, 12/94

CIMPAM

CalcaDB

April 26, 2010 ,Monday 05:14:18 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA | W/E: PANAY WY | I/S No: 3

AM/PM: AM | Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	1	1318	25	159	575	51	28	0	298	230	1	4
AMBIENT												
RELATED												
PROJECT												
TOTAL	1	1318	25	159	575	51	28	0	298	230	1	4

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	0 1 0 0 0 1 0	0 0 0 1 0 0 0
SIGNAL Phasing	Perm	Perm	Perm	Perm
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

SouthBound A: 209 B: 159

EastBound A: 235 B: 230

WestBound A: 298 B: 28

NorthBound A: 448 B: 1

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (448 + 159 + 298 + 230) / 1500 = 0.687 LOS B

Developed by Chun Wong, 12/94

CIMPAM

CalcaDB

April 26, 2010 ,Monday 05:14:18 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: MARQUESAS WY I/S No: 4

AM/PM: AM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	49	930	7	107	438	67	3	24	267	125	12	15
AMBIENT												
RELATED												
PROJECT												
TOTAL	49	930	7	107	438	67	3	24	267	125	12	15

LANE							
NORTHBOUND	1	0	2	0	1	0	0
SOUTHBOUND	1	0	2	0	0	1	0
WESTBOUND	0	1	0	0	1	0	0
EASTBOUND	1	0	1	0	0	1	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Perm	Auto
SOUTHBOUND	Perm	Auto
WESTBOUND	Perm	Auto
EASTBOUND	Perm	Auto

Critical Movements Diagram

	A:	B:
SouthBound	219	107
EastBound	15	125
WestBound	267	3
NorthBound	312	49

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (312 □ 107 □ 267 □ 125) / □1500 □ 0.471 LOS □ A

Developed by Chun Wong, 12/94

CIMPAM

CalcaDB

April 26, 2010 ,Monday 05:14:18 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: TAHITI WY I/S No: 5

AM/PM: AM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	6	757	5	87	252	12	20	2	162	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	6	757	5	87	252	12	20	2	162	0	0	0

LANE							
NORTHBOUND	0	1	0	0	1	0	0
SOUTHBOUND	1	0	1	0	1	0	0
WESTBOUND	0	1	0	0	1	0	0
EASTBOUND	0	0	0	0	0	0	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Perm	Auto
SOUTHBOUND	Perm	Auto
WESTBOUND	Split	Auto
EASTBOUND	□none□	□none□

Critical Movements Diagram

	A:	B:
SouthBound	132	87
EastBound	0	0
WestBound	162	20
NorthBound	384	6

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (384 □ 87 □ 162 □ 0) / □1500 □ 0.352 LOS □ A

Developed by Chun Wong, 12/94

CIMPAM

CalcaDB

April 26, 2010 ,Monday 05:14:18 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: BORA BORA WY I/S No: 6

AM/PM: AM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	5	527	10	61	212	10	6	1	165	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	5	527	10	61	212	10	6	1	165	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 1 0 0	1 0 1 0 1 0 0	0 0 0 1 0 0 0	0 0 0 0 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	none	none

Critical Movements Diagram

SouthBound A: 111 B: 61

EastBound A: 0 B: 0

WestBound A: 172 B: 6

NorthBound A: 271 B: 5

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

$$V/C = \frac{271 + 61 + 172 + 0}{1200} = 0.420 \quad LOS\ A$$

Developed by Chun Wong, 12/94

CIMPAM

CalcaDB

April 26, 2010 ,Monday 05:14:18 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: ADMIRALTY WY I/S No: 7

AM/PM: AM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPT(ALT A)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	40	119	152	178	87	104	91	781	342	228	1378	23
AMBIENT												
RELATED												
PROJECT												
TOTAL	40	119	152	178	87	104	91	781	342	228	1378	23

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 1 0 0	1 1 0 0 0 1 0	1 0 2 0 1 0 0	1 0 1 0 1 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Split	Auto	Split	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 133 B: 133

EastBound A: 701 B: 228

WestBound A: 374 B: 91

NorthBound A: 156 B: 40

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

$$V/C = \frac{156 + 133 + 91 + 701}{1425} = 0.689 \quad LOS\ B$$

Developed by Chun Wong, 12/94

CIMPAM

CalcaDB

April 26, 2010 ,Monday 05:14:18 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY | W/E: ADMIRALTY WY | I/S No: 7

AM/PM: AM | Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPT(ALT B)

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	40	119	152	178	87	104	91	781	342	228	1378	23
AMBIENT												
RELATED												
PROJECT												
TOTAL	40	119	152	178	87	104	91	781	342	228	1378	23

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 0 1 0	2 0 1 0 0 1 0	1 0 2 0 1 0 0	1 0 1 0 1 0 0
SIGNAL Phasing	Split	Split	Perm	Perm
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

	A	B
SouthBound	104	98
EastBound	701	228
WestBound	374	91
NorthBound	159	40

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (159 + 104 + 91 + 701) / 1425 = 0.670 LOS B

Developed by Chun Wong, 12/94

CIMPAM

CalcaDB

April 26, 2010 ,Monday 05:14:18 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD | W/E: WASHINGTON BLVD | I/S No: 8

AM/PM: AM | Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	621	1949	266	290	1504	169	202	665	262	221	954	548
AMBIENT												
RELATED												
PROJECT												
TOTAL	621	1949	266	290	1504	169	202	665	262	221	954	548

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	2 0 2 0 1 0 0	2 0 2 0 1 0 0	2 0 2 0 0 1 0	2 0 2 0 0 1 0
SIGNAL Phasing	Prot-Fix	Prot-Fix	Prot-Fix	Prot-Fix
SIGNAL RTOR	Auto	Auto	OLA	OLA

Critical Movements Diagram

	A	B
SouthBound	558	160
EastBound	477	122
WestBound	333	111
NorthBound	738	342

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (342 + 558 + 111 + 477) / 1375 = 1.012 LOS F

Developed by Chun Wong, 12/94

CIMPAM

CalcaDB

April 26, 2010 ,Monday 05:14:18 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD   W/E: SR-90 ON/OFF RAMPS   I/S No: 9

AM/PM: AM   Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	2157	176	1049	1747	0	149	0	899	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	2157	176	1049	1747	0	149	0	899	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 2 0 1 0 0	2 0 3 0 0 0 0	2 0 0 0 0 2 0	0 0 0 0 0 0 0
SIGNAL Phasing	Perm	Prot-Fix	Split	none
SIGNAL RTOR	Auto	none	OLA	none

Critical Movements Diagram

SouthBound A: 582 B: 577

EastBound A: 0 B: 0

WestBound A: 0 B: 82

NorthBound A: 778 B: 0

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (778 □ 577 □ 82 □ 0) / □1425 □ 0.938   LOS □ E

Developed by Chun Wong, 12:94

CIMPAM

CalcaDB

April 26, 2010 ,Monday 05:14:18 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY   W/E: BALI WY   I/S No: 10

AM/PM: AM   Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	27	1091	65	332	1451	28	30	40	263	15	48	15
AMBIENT									-183			
RELATED												
PROJECT												
TOTAL	27	1091	65	332	1451	28	30	40	80	15	48	15

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	2 0 1 0 1 0 0	1 0 0 0 1 1 0	0 1 0 0 1 0 0
SIGNAL Phasing	Prot-Fix	Prot-Fix	Perm	Perm
SIGNAL RTOR	Auto	Auto	OLA	Auto

Critical Movements Diagram

SouthBound A: 740 B: 183

EastBound A: 39 B: 15

WestBound A: 60 B: 30

NorthBound A: 578 B: 27

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (27 □ 740 □ 60 □ 15) / □1425 □ 0.521   LOS □ A

Developed by Chun Wong, 12:94

CIMPAM

CalcaDB

April 26, 2010 ,Monday 05:14:18 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: BALI WY I/S No: 11

AM/PM: AM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	136	2030	33	28	1668	203	3	0	14	219	2	221
AMBIENT												
RELATED												
PROJECT												
TOTAL	136	2030	33	28	1668	203	3	0	14	219	2	221

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	0 0 0 1 0 0 0	1 1 0 0 0 1 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	Auto	Split	Auto

Critical Movements Diagram

	A:	B:
SouthBound	624	28
EastBound	153	111
WestBound	17	3
NorthBound	688	136

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (136 + 624 + 17 + 153) / 1375 = 0.606 LOS B

Developed by Chun Wong, 12 94

CIMPAM

CalcaDB

April 26, 2010 ,Monday 05:14:18 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: MINDANAO WY I/S No: 12

AM/PM: AM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	29	680	55	587	790	55	157	98	595	75	87	27
AMBIENT									-323			
RELATED												
PROJECT												
TOTAL	29	680	55	587	790	55	157	98	272	75	87	27

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 1 0 1 0 0	2 0 1 0 1 0 0	1 0 0 1 0 1 0	1 1 0 0 1 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Split	OLA	Split	Auto

Critical Movements Diagram

	A:	B:
SouthBound	423	323
EastBound	63	63
WestBound	185	157
NorthBound	368	29

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (368 + 323 + 185 + 63) / 1375 = 0.613 LOS B

Developed by Chun Wong, 12 94

CIMPAM

CalcaDB

April 26, 2010 ,Monday 05:14:18 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: MINDANAO WY I/S No: 13

AM/PM: AM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	160	2053	331	193	1509	78	214	611	102	0	808	54
AMBIENT												
RELATED												
PROJECT												
TOTAL	160	2053	331	193	1509	78	214	611	102	0	808	54

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	3	0	0	1	0	1	0	2	0	1	0	0	2	0	1	0	1	0	0	0	0	1	0	1	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 529 B: 193

EastBound A: 431 B: 0

WestBound A: 357 B: 118

NorthBound A: 684 B: 160

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (684 □ 193 □ 118 □ 431) / □1375 □ 0.967 LOS □ E

Developed by Chun Wong, 12'94

CIMPAM

CalcaDB

April 26, 2010 ,Monday 05:14:18 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: FIJI WY I/S No: 14

AM/PM: AM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	0	734	0	134	0	120	636	83	161	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	734	0	134	0	120	636	83	161	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	2	0	0	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	□none□	□none□	Split	Free	Perm	Free	Perm	□none□

Critical Movements Diagram

SouthBound A: 0 B: 404

EastBound A: 81 B: 83

WestBound A: 120 B: 0

NorthBound A: 0 B: 0

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (0 □ 404 □ 120 □ 83) / □1500 □ 0.335 LOS □ A

Developed by Chun Wong, 12'94

CIMPAM

CalcaDB

April 26, 2010 ,Monday 05:14:18 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: FIJI WY I/S No: 15

AM/PM: AM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	655	2155	35	41	1695	71	16	14	41	135	17	742
AMBIENT												
RELATED												
PROJECT												
TOTAL	655	2155	35	41	1695	71	16	14	41	135	17	742

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	2	0	2	0	1	0	0	1	0	2	0	1	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Free

Critical Movements Diagram

SouthBound A: 589 B: 41

EastBound A: 17 B: 135

WestBound A: 71 B: 16

NorthBound A: 730 B: 360

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (360 + 589 + 71 + 135) / 1425 = 0.741 LOS C

Developed by Chun Wong, 12/94

CIMPAM

CalcaDB

April 26, 2010 ,Monday 05:14:18 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 EB ON/OFF RAMPS I/S No: 16

AM/PM: AM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	385	1045	492	991	0	0	0	0	26	1186	13
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	385	1045	492	991	0	0	0	0	26	1186	13

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	0	1	0	1	1	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Prot-Fix	none	none	none	Split	Auto

Critical Movements Diagram

SouthBound A: 496 B: 271

EastBound A: 600 B: 26

WestBound A: 0 B: 0

NorthBound A: 575 B: 0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (575 + 271 + 0 + 600) / 1425 = 0.945 LOS E

Developed by Chun Wong, 12/94

CIMPAM

CalcaDB

April 26, 2010 ,Monday 05:14:18 PM

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY | W/E: SR-90 WB ON/OFF RAMPS | I/S No: 17

AM/PM: AM | Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	12	400	0	0	758	26	725	1008	460	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	12	400	0	0	758	26	725	1008	460	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 0 0 0	0 0 2 0 1 0 0	1 1 1 0 0 1 0	0 0 0 0 0 0 0
SIGNAL Phasing	Prot-Fix	Perm	Split	none
SIGNAL RTOR	none	Auto	Auto	none

Critical Movements Diagram

SouthBound A: 261 B: 0

EastBound A: 0 B: 0

WestBound A: 578 B: 578

NorthBound A: 200 B: 12

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (12 + 261 + 578 + 0) / 1425 = 0.527 LOS A

Developed by Chun Wong, 12:94

CIMPAM

CalcaDB

April 26, 2010 ,Monday 05:14:18 PM

INTERSECTION DATA SUMMARY SHEET

N/S: CULVER BLVD | W/E: JEFFERSON BLVD | I/S No: 18

AM/PM: AM | Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: | STUDY DATE: | GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	2491	787	30	408	0	513	0	4	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	2491	787	30	408	0	513	0	4	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 2 0 0 1 0	0 1 1 0 0 0 0	2 0 0 0 0 1 0	0 0 0 0 0 0 0
SIGNAL Phasing	Perm	Perm	Split	none
SIGNAL RTOR	Free	none	Auto	none

Critical Movements Diagram

SouthBound A: 294 B: 30

EastBound A: 0 B: 0

WestBound A: 4 B: 282

NorthBound A: 1246 B: 0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (1246 + 30 + 282 + 0) / 1500 = 0.969 LOS E

Developed by Chun Wong, 12:94

CIMPAM

CalcaDB

April 26, 2010 ,Monday 05:14:18 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: JEFFERSON BLVD I/S No: 19

AM/PM: AM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	46	2134	773	488	1508	256	428	187	625	181	480	66
AMBIENT												
RELATED												
PROJECT												
TOTAL	46	2134	773	488	1508	256	428	187	625	181	480	66

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	1 0 4 0 0 1 0	2 0 3 0 1 0 0	2 0 2 0 0 2 0	1 0 2 0 1 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	Auto

Critical Movements Diagram

SouthBound A: 441 B: 268

EastBound A: 182 B: 181

WestBound A: 94 B: 235

NorthBound A: 538 B: 46

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (538 + 268 + 235 + 182) / 1375 = 0.819 LOS D

Developed by Chun Wong, 12/94

CIMPAM

CalcaDB

April 26, 2010 ,Monday 05:14:18 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: WASHINGTON BLVD I/S No: 20

AM/PM: AM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	277	0	395	0	0	0	259	694	0	0	1087	109
AMBIENT												
RELATED												
PROJECT												
TOTAL	277	0	395	0	0	0	259	694	0	0	1087	109

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	2 0 0 0 0 1 0	0 0 0 0 0 0 0	2 0 2 0 0 0 0	0 0 2 0 0 1 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Split	OLA	none	none	Prot-Fix	none	Perm	OLA

Critical Movements Diagram

SouthBound A: 0 B: 0

EastBound A: 544 B: 0

WestBound A: 347 B: 142

NorthBound A: 253 B: 152

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (253 + 0 + 142 + 544) / 1425 = 0.589 LOS A

Developed by Chun Wong, 12/94

PM PEAK HOUR

LEVEL OF SERVICE WORKSHEETS

CIMPPM

CalcaDB

April 26, 2010 ,Monday 05:20:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA / OCEAN AVE W/E: WASHINGTON BLVD I/S No: 1

AM/PM: PM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	390	210	224	139	552	50	222	892	183	44	723	467
AMBIENT												
RELATED												
PROJECT												
TOTAL	390	210	224	139	552	50	222	892	183	44	723	467

	NB							SB							WB							EB						
LANE	2	0	1	0	0	1	0	1	0	0	0	1	0	0	1	0	1	0	1	0	0	1	0	2	0	0	1	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Split	Auto	Split	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

	A	B
SouthBound	602	139
EastBound	362	44
WestBound	538	222
NorthBound	224	215

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ A(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (224 □ 602 □ 222 □ 362) / □1425 □ 0.919 LOS □ E

Developed by Chun Wong, 12.94

CIMPPM

CalcaDB

April 26, 2010 ,Monday 05:20:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: ADMIRALTY WY I/S No: 2

AM/PM: PM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPT(ALT A)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	346	911	743	499	0	1222	0	493	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	346	911	743	499	0	1222	0	493	0	0	0

	NB							SB							WB							EB						
LANE	0	0	2	0	0	1	0	2	0	2	0	0	0	0	3	0	0	0	0	2	0	0	0	0	0	0	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Free	Prot-Fix	□none□	Split	OLA	□none□	□none□

Critical Movements Diagram

	A	B
SouthBound	250	409
EastBound	0	0
WestBound	0	452
NorthBound	173	0

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (173 □ 409 □ 452 □ 0) / □1425 □ 0.656 LOS □ B

Developed by Chun Wong, 12.94

CIMPPM

CalcaDB

April 26, 2010 ,Monday 05:20:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: ADMIRALTY WY I/S No: 2

AM/PM: PM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPT(ALT B)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	0	0	743	0	499	0	1222	493	346	911	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	743	0	499	0	1222	493	346	911	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 0 0 0 0 0	2 0 0 0 0 1 0	0 0 2 0 0 1 0	2 0 2 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	none	none	Split	Auto	Perm	OLA	Prot-Fix	none

Critical Movements Diagram

Approach	A:	B:
SouthBound	404	409
EastBound	456	190
WestBound	611	0
NorthBound	0	0

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (0 + 409 + 611 + 190) / 1425 = 0.779 LOS C

Developed by Chun Wong, 12/94

CIMPPM

CalcaDB

April 26, 2010 ,Monday 05:20:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: PANAY WY I/S No: 3

AM/PM: PM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	2	826	32	292	1127	107	18	2	205	82	1	2
AMBIENT												
RELATED												
PROJECT												
TOTAL	2	826	32	292	1127	107	18	2	205	82	1	2

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 1 0 0	0 1 0 0 0 1 0	0 0 0 1 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

Approach	A:	B:
SouthBound	411	292
EastBound	85	82
WestBound	205	18
NorthBound	286	2

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (286 + 292 + 205 + 82) / 1500 = 0.507 LOS A

Developed by Chun Wong, 12/94

CIMPPM

CalcaDB

April 26, 2010 ,Monday 05:20:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: MARQUESAS WY I/S No: 4

AM/PM: PM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	20	578	12	206	745	106	6	8	154	134	24	43
AMBIENT												
RELATED												
PROJECT												
TOTAL	20	578	12	206	745	106	6	8	154	134	24	43

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 1 0 0	1 0 2 0 0 1 0	0 1 0 0 1 0 0	1 0 1 0 0 1 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 373 B: 206

EastBound A: 43 B: 134

WestBound A: 154 B: 6

NorthBound A: 197 B: 20

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C = (197 + 206 + 154 + 134) / 1500 = 0.391 LOS A

Developed by Chun Wong, 12/94

CIMPPM

CalcaDB

April 26, 2010 ,Monday 05:20:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: TAHITI WY I/S No: 5

AM/PM: PM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	2	437	12	131	588	25	6	0	90	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	2	437	12	131	588	25	6	0	90	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 1 0 0	1 0 1 0 1 0 0	0 1 0 0 1 0 0	0 0 0 0 0 0 0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Perm	Auto	Perm	Auto	Split	Auto	none	none

Critical Movements Diagram

SouthBound A: 307 B: 131

EastBound A: 0 B: 0

WestBound A: 90 B: 6

NorthBound A: 229 B: 2

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (229 + 131 + 90 + 0) / 1500 = 0.230 LOS A

Developed by Chun Wong, 12/94

CIMPPM

CalcaDB

April 26, 2010 ,Monday 05:20:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: VIA MARINA W/E: BORA BORA WY I/S No: 6

AM/PM: PM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	3	347	5	160	440	20	1	0	92	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	3	347	5	160	440	20	1	0	92	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 1 0 0	1 0 1 0 1 0 0	0 0 0 1 0 0 0	0 0 0 0 0 0 0
SIGNAL Phasing	Perm	Perm	Perm	none
SIGNAL RTOR	Auto	Auto	Auto	none

Critical Movements Diagram

SouthBound A: 230 B: 160

EastBound A: 0 B: 0

WestBound A: 93 B: 1

NorthBound A: 179 B: 3

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C = (179 + 160 + 93 + 0) / 1200 = 0.360 LOS A

Developed by Chun Wong, 12.94

CIMPPM

CalcaDB

April 26, 2010 ,Monday 05:20:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: ADMIRALTY WY I/S No: 7

AM/PM: PM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPT(ALT A)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	39	129	156	396	210	225	216	1445	394	166	1410	51
AMBIENT												
RELATED												
PROJECT												
TOTAL	39	129	156	396	210	225	216	1445	394	166	1410	51

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 1 0 0 1 0 0	1 1 0 0 0 1 0	1 0 2 0 1 0 0	1 0 1 0 1 0 0
SIGNAL Phasing	Split	Split	Perm	Perm
SIGNAL RTOR	Auto	Auto	Auto	Auto

Critical Movements Diagram

SouthBound A: 303 B: 303

EastBound A: 731 B: 166

WestBound A: 613 B: 216

NorthBound A: 182 B: 39

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (182 + 303 + 216 + 731) / 1425 = 0.935 LOS E

Developed by Chun Wong, 12.94

CIMPPM

CalcaDB

April 26, 2010 ,Monday 05:20:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: ADMIRALTY WY I/S No: 7

AM/PM: PM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPT(ALT B)

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	39	129	156	396	210	225	216	1445	394	166	1410	51
AMBIENT												
RELATED												
PROJECT												
TOTAL	39	129	156	396	210	225	216	1445	394	166	1410	51

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	0 1 0 0 0 1 0	2 0 1 0 0 1 0	1 0 2 0 1 0 0	1 0 1 0 1 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Split	Auto	Split	Auto	Perm	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 225 B: 218

EastBound A: 731 B: 166

WestBound A: 613 B: 216

NorthBound A: 168 B: 39

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ A(N/B) □ A(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (168 □ 225 □ 216 □ 731) / □1425 □ 0.870 LOS □ D

Developed by Chun Wong, 12.94

CIMPPM

CalcaDB

April 26, 2010 ,Monday 05:20:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: WASHINGTON BLVD I/S No: 8

AM/PM: PM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	674	1954	371	323	1819	251	382	1006	398	184	836	649
AMBIENT												
RELATED												
PROJECT												
TOTAL	674	1954	371	323	1819	251	382	1006	398	184	836	649

LANE	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
	2 0 2 0 1 0 0	2 0 2 0 1 0 0	2 0 2 0 0 1 0	2 0 2 0 0 1 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	OLA

Critical Movements Diagram

SouthBound A: 690 B: 178

EastBound A: 418 B: 101

WestBound A: 503 B: 210

NorthBound A: 775 B: 371

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (371 □ 690 □ 210 □ 418) / □1375 □ 1.158 LOS □ F

Developed by Chun Wong, 12.94

CIMPPM

CalcaDB

April 26, 2010 ,Monday 05:20:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: SR-90 ON/OFF RAMPS I/S No: 9

AM/PM: PM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	2212	218	942	2176	0	170	0	1202	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	2212	218	942	2176	0	170	0	1202	0	0	0

LANE	LT	LT/TH	TH	LT/TH/RT	TH/RT	RT	LT/RT
NORTHBOUND	0	0	2	0	1	0	0
SOUTHBOUND	2	0	3	0	0	0	0
WESTBOUND	2	0	0	0	0	2	0
EASTBOUND	0	0	0	0	0	0	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Perm	Auto
SOUTHBOUND	Prot-Fix	none
WESTBOUND	Split	OLA
EASTBOUND	none	none

Critical Movements Diagram

SouthBound A: 725 B: 518

EastBound A: 0 B: 0

WestBound A: 143 B: 94

NorthBound A: 810 B: 0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C $\frac{810 \quad 518 \quad 143 \quad 0}{1425}$ 0.962 LOS E

Developed by Chun Wong, 12/94

CIMPPM

CalcaDB

April 26, 2010 ,Monday 05:20:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: BALI WY I/S No: 10

AM/PM: PM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	34	1570	208	306	1505	37	70	85	392	41	99	42
AMBIENT									-168			
RELATED												
PROJECT												
TOTAL	34	1570	208	306	1505	37	70	85	224	41	99	42

LANE	LT	LT/TH	TH	LT/TH/RT	TH/RT	RT	LT/RT
NORTHBOUND	1	0	1	0	1	0	0
SOUTHBOUND	2	0	1	0	1	0	0
WESTBOUND	1	0	0	0	1	1	0
EASTBOUND	0	1	0	0	1	0	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Prot-Fix	Auto
SOUTHBOUND	Prot-Fix	Auto
WESTBOUND	Perm	OLA
EASTBOUND	Perm	Auto

Critical Movements Diagram

SouthBound A: 771 B: 168

EastBound A: 112 B: 41

WestBound A: 155 B: 70

NorthBound A: 889 B: 34

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) B(E/B)

V/C $\frac{889 \quad 168 \quad 155 \quad 41}{1425}$ 0.809 LOS D

Developed by Chun Wong, 12/94

CIMPPM

CalcaDB

April 26, 2010 ,Monday 05:20:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: BALI WY I/S No: 11

AM/PM: PM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	162	2085	20	6	1972	375	12	0	31	404	3	209
AMBIENT												
RELATED												
PROJECT												
TOTAL	162	2085	20	6	1972	375	12	0	31	404	3	209

LANE							
NORTHBOUND	1	0	2	0	1	0	0
SOUTHBOUND	1	0	2	0	1	0	0
WESTBOUND	0	0	0	1	0	0	0
EASTBOUND	1	1	0	0	0	1	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Prot-Fix	Auto
SOUTHBOUND	Prot-Fix	Auto
WESTBOUND	Split	Auto
EASTBOUND	Split	Auto

Critical Movements Diagram

	A	B
SouthBound	782	6
EastBound	204	204
WestBound	43	12
NorthBound	702	162

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C $= \frac{162 + 782 + 43 + 204}{1375}$ = 0.796 LOS C

Developed by Chun Wong, 12.94

CIMPPM

CalcaDB

April 26, 2010 ,Monday 05:20:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: MINDANAO WY I/S No: 12

AM/PM: PM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	43	1066	80	455	1205	110	355	223	769	156	136	35
AMBIENT									-250			
RELATED												
PROJECT												
TOTAL	43	1066	80	455	1205	110	355	223	519	156	136	35

LANE							
NORTHBOUND	1	0	1	0	1	0	0
SOUTHBOUND	2	0	1	0	1	0	0
WESTBOUND	1	0	0	1	0	1	0
EASTBOUND	1	1	0	0	1	0	0

SIGNAL	Phasing	RTOR
NORTHBOUND	Prot-Fix	Auto
SOUTHBOUND	Prot-Fix	Auto
WESTBOUND	Split	OLA
EASTBOUND	Split	Auto

Critical Movements Diagram

	A	B
SouthBound	658	250
EastBound	109	109
WestBound	371	355
NorthBound	573	43

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements A(N/B) B(S/B)

West/East Critical Movements A(W/B) A(E/B)

V/C $= \frac{573 + 250 + 371 + 109}{1375}$ = 0.878 LOS D

Developed by Chun Wong, 12.94

CIMPPM

CalcaDB

April 26, 2010 ,Monday 05:20:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: MINDANAO WY I/S No: 13

AM/PM: PM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	175	2093	317	249	1970	120	412	955	101	0	743	122
AMBIENT												
RELATED												
PROJECT												
TOTAL	175	2093	317	249	1970	120	412	955	101	0	743	122

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	3	0	0	1	0	1	0	2	0	1	0	0	2	0	1	0	1	0	0	0	0	1	0	1	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto

Critical Movements Diagram

SouthBound A: 697 B: 249

EastBound A: 433 B: 0

WestBound A: 528 B: 227

NorthBound A: 698 B: 175

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ B(W/B) □ A(E/B)

V/C □ (698 □ 249 □ 227 □ 433) / □1375 □ 1.099 LOS □ F

Developed by Chun Wong, 12 94

CIMPPM

CalcaDB

April 26, 2010 ,Monday 05:20:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: ADMIRALTY WY W/E: FIJI WY I/S No: 14

AM/PM: PM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	0	991	0	194	0	286	619	122	340	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	991	0	194	0	286	619	122	340	0

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	2	0	0	0	

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	□none□	□none□	Split	Free	Perm	Free	Perm	□none□

Critical Movements Diagram

SouthBound A: 0 B: 545

EastBound A: 170 B: 122

WestBound A: 286 B: 0

NorthBound A: 0 B: 0

A □ Adjusted Through/Right Volume
B □ Adjusted Left Volume
□□ ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (0 □ 545 □ 286 □ 122) / □1500 □ 0.565 LOS □ A

Developed by Chun Wong, 12 94

CIMPPM

April 26, 2010 ,Monday 05:20:27 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: FIJI WY I/S No: 15

AM/PM: PM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	928	2357	24	92	2345	146	42	23	40	161	8	1162
AMBIENT												
RELATED												
PROJECT												
TOTAL	928	2357	24	92	2345	146	42	23	40	161	8	1162

	NB							SB							WB							EB						
LANE	2	0	2	0	1	0	0	1	0	2	0	1	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	Auto	Prot-Fix	Auto	Perm	Auto	Perm	Free

Critical Movements Diagram

SouthBound A: 830 B: 92

EastBound A: 8 B: 161

WestBound A: 105 B: 42

NorthBound A: 794 B: 510

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ B(N/B) □ A(S/B)

West/East Critical Movements □ A(W/B) □ B(E/B)

V/C □ (510 □ 830 □ 105 □ 161) / □1425 □ 1.057 LOS □ F

Developed by Chun Wong, 12/94

CIMPPM

April 26, 2010 ,Monday 05:20:27 PM

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: MINDANAO WY W/E: SR-90 EB ON/OFF RAMPS I/S No: 16

AM/PM: PM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND			SOUTHBOUND			WESTBOUND			EASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	536	867	817	1335	0	0	0	0	12	1104	41
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	536	867	817	1335	0	0	0	0	12	1104	41

	NB							SB							WB							EB						
LANE	0	0	1	0	1	1	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Prot-Fix	□none□	□none□	□none□	Split	Auto

Critical Movements Diagram

SouthBound A: 668 B: 449

EastBound A: 573 B: 12

WestBound A: 0 B: 0

NorthBound A: 468 B: 0

A □Adjusted Through/Right Volume
B □Adjusted Left Volume
□□ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements □ A(N/B) □ B(S/B)

West/East Critical Movements □ A(W/B) □ A(E/B)

V/C □ (468 □ 449 □ 0 □ 573) / □1425 □ 0.976 LOS □ E

Developed by Chun Wong, 12/94

CIMPPM

CalcaDB

April 26, 2010 ,Monday 05:20:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S:	MINDANAO WY	W/E:	SR-90 WB ON/OFF RAMPS	I/S No:	17
AM/PM:	PM	Comments:	CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT		
COUNT DATE:		STUDY DATE:		GROWTH FACTOR:	

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	18	531	0	0	1235	91	922	1286	525	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	18	531	0	0	1235	91	922	1286	525	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	1 0 2 0 0 0 0	0 0 2 0 1 0 0	1 1 1 0 0 1 0	0 0 0 0 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Prot-Fix	none	Perm	Auto	Split	Auto	none	none

Critical Movements Diagram

	A	B
SouthBound	442	0
EastBound	0	0
WestBound	736	736
NorthBound	266	18

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)
West/East Critical Movements A(W/B) A(E/B)

V/C = (18 + 442 + 736 + 0) / 1425 = 0.769 LOS C

Developed by Chun Wong, 12/94

CIMPPM

CalcaDB

April 26, 2010 ,Monday 05:20:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S:	CULVER BLVD	W/E:	JEFFERSON BLVD	I/S No:	18
AM/PM:	PM	Comments:	CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT		
COUNT DATE:		STUDY DATE:		GROWTH FACTOR:	

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	0	947	379	65	1417	0	1521	0	3	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	947	379	65	1417	0	1521	0	3	0	0	0

	NORTHBOUND	SOUTHBOUND	WESTBOUND	EASTBOUND
LANE	0 0 2 0 0 1 0	0 1 1 0 0 0 0	2 0 0 0 0 1 0	0 0 0 0 0 0 0

	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Perm	Free	Perm	none	Split	Auto	none	none

Critical Movements Diagram

	A	B
SouthBound	904	65
EastBound	0	0
WestBound	3	837
NorthBound	474	0

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

Results

North/South Critical Movements B(N/B) A(S/B)
West/East Critical Movements B(W/B) A(E/B)

V/C = (0 + 904 + 837 + 0) / 1500 = 1.091 LOS F

Developed by Chun Wong, 12/94

CIMPPM

CalcaDB

April 26, 2010 ,Monday 05:20:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: LINCOLN BLVD W/E: JEFFERSON BLVD I/S No: 19

AM/PM: PM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	66	2022	346	671	1999	833	666	624	838	72	299	66
AMBIENT												
RELATED												
PROJECT												
TOTAL	66	2022	346	671	1999	833	666	624	838	72	299	66

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	1	0	4	0	0	1	0	2	0	3	0	1	0	0	2	0	2	0	0	2	0	1	0	2	0	1	0	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Prot-Fix	OLA	Prot-Fix	Auto	Prot-Fix	OLA	Prot-Fix	Auto

Critical Movements Diagram

SouthBound A: 833 B: 369

EastBound A: 122 B: 72

WestBound A: 312 B: 366

NorthBound A: 506 B: 66

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (66 + 833 + 366 + 122) / 1375 = 0.939 LOS E

Developed by Chun Wong, 12/94

CIMPPM

CalcaDB

April 26, 2010 ,Monday 05:20:27 PM

INTERSECTION DATA SUMMARY SHEET

N/S: PALAWAN WY W/E: WASHINGTON BLVD I/S No: 20

AM/PM: PM Comments: CUMULATIVE(2020)W/LCP BUILDOUT W/IMPROVEMENT

COUNT DATE: STUDY DATE: GROWTH FACTOR:

Volume/Lane/Signal Configurations

	NORTHBOUND LT	NORTHBOUND TH	NORTHBOUND RT	SOUTHBOUND LT	SOUTHBOUND TH	SOUTHBOUND RT	WESTBOUND LT	WESTBOUND TH	WESTBOUND RT	EASTBOUND LT	EASTBOUND TH	EASTBOUND RT
EXISTING	287	0	319	0	0	0	513	953	0	0	875	187
AMBIENT												
RELATED												
PROJECT												
TOTAL	287	0	319	0	0	0	513	953	0	0	875	187

	NORTHBOUND							SOUTHBOUND							WESTBOUND							EASTBOUND						
LANE	2	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	2	0	0	1	0

	NB Phasing	NB RTOR	SB Phasing	SB RTOR	WB Phasing	WB RTOR	EB Phasing	EB RTOR
SIGNAL	Split	OLA	none	none	Prot-Fix	none	Perm	OLA

Critical Movements Diagram

SouthBound A: 0 B: 0

EastBound A: 438 B: 0

WestBound A: 477 B: 282

NorthBound A: 37 B: 158

V/C RATIO	LOS
0.00 - 0.60	A
0.61 - 0.70	B
0.71 - 0.80	C
0.81 - 0.90	D
0.91 - 1.00	E

A Adjusted Through/Right Volume
B Adjusted Left Volume
ATSAC Benefit

Results

North/South Critical Movements B(N/B) A(S/B)

West/East Critical Movements B(W/B) A(E/B)

V/C = (158 + 0 + 282 + 438) / 1425 = 0.546 LOS A

Developed by Chun Wong, 12/94

RAJU Associates, Inc.

505 E.Colorado Blvd.
Suite 202
Pasadena, CA 91101
Voice: (626) 792-2700
Fax: (626) 792-2772

TECHNICAL MEMORANDUM

TO: Mr. Bill Winter, LACDPW
Mr. Barry Kurtz, LACDBH

FROM: Srinath Raju, P.E.
Chris Munoz

SUBJECT: Marina Del Rey Traffic Conditions Analysis
Seasonal Variation & Weekday vs. Weekend Evaluation

DATE: September 8, 2010 **REF:** RA-291Addl

This memorandum has been prepared in response to comments received regarding the weekday and weekend traffic conditions within the Marina Del Rey area of Los Angeles County. This memorandum provides documentation of examination and evaluation of traffic counts conducted during different days - weekdays and weekend days, in different seasons – summer and non-summer, provided by the Los Angeles County Department of Public Works, Traffic and Lighting Division.

TRAFFIC COUNTS - SUMMER VERSUS NON-SUMMER CONDITIONS

Machine counts conducted during the month of August 2010, were obtained from the Los Angeles County Department of Public Works, Traffic and Lighting Division at numerous locations within the Marina Del Rey area. Both weekday and weekend day counts were obtained. Thursday counts from the month of August were examined and used as representative counts for Summer Weekday conditions. These counts are included in Appendix A.

Saturday and Sunday counts from the same month of August were also obtained and used as representative counts for peak Summer Weekend conditions. These counts are included in Appendix B.

The non-summer commuter weekday traffic counts (Tuesday through Thursday counts) conducted in the year 2009 by Raju Associates, Inc has been used in the determination of the year 2010 non-summer weekday peak traffic conditions.

In the Marina Del Rey area, it has been observed that the evening peak hours are susceptible to more congestion than the morning peak hours. Therefore, comparisons of summer peak hours to the non-summer evening peak hours used in the Marina Del Rey Local Coastal Plan Amendment Traffic Study have been made in this evaluation.

Table 1 provides a comparison of summer weekday peak hour traffic counts at various locations within the Marina Del Area area to the non-summer commuter weekday peak hour traffic volumes at the same locations. An aggregation of the overall system-wide traffic within Marina Del Rey is also provided in this table.

It can be observed from Table 1 that the total peak hour traffic volumes on summer and non-summer weekdays are very similar. The non-summer commuter weekday evening peak hour traffic volumes on a system-wide basis are approximately the same as the summer weekday system-wide evening peak hour traffic volumes.

A comparison of the non-summer commuter weekday evening peak hour traffic volumes to the summer weekend mid-day peak traffic counts from August 2010 was also made. This comparison is shown in Table 2. The mid-day peak hour traffic volumes during summer weekend days (Saturday and Sunday) at various locations within the Marina Del Rey area, on a system-wide basis, was used for this comparison.

From Table 2, it can be observed that, on a system-wide basis, the non-summer commuter weekday evening peak hour traffic volumes analyzed in the Raju Associates' Traffic Study for the Marina Del Rey Local Coastal Plan Amendment Project were greater than both Saturday and Sunday mid-day peak hour traffic volumes from summer 2010 at the same locations.

A time-series examination and evaluation of traffic counts from the last six years was also made and this evaluation is presented in Table 3. All the raw data used in this time-series evaluation was also obtained from the Los Angeles County Department of Public Works, Traffic and Lighting Division and are included in Appendix C.

From Table 3, it can be observed that in all of the six years data at almost all locations, weekday evening peak hour traffic volumes were clearly greater than weekend mid-day peak hour traffic volumes at the same locations.

Finally, a set of comparisons from traffic counts conducted for the Fisherman's Village Traffic Study in the year 2007 was also made and summarized in Table 4. Additionally, information regarding the V/C ratios and levels of service at the various intersections in the vicinity of Marina Del Rey was also included in this table. The supporting data, also obtained from the Los Angeles County Department of Public Works, Traffic and Lighting Division, is provided in Appendix D.

From Table 4, it can be observed that on a system-wide basis, the weekday evening and weekend mid-day peak hours were similar relative to traffic counts and traffic operations, although the weekday evening peak hour traffic counts were slightly higher.

From these tables, the following key observations can be made:

1. Non-summer commuter weekday evening peak hour traffic volumes, similar to summer commuter weekday evening peak hour traffic volumes represent the worst-case conditions for evaluation. These non-summer commuter weekday conditions have been evaluated in the Raju Associates Traffic Study for the Marina Del Rey Local Coastal Program Amendment Project.
2. Non-summer commuter weekday evening peak hour traffic volumes are greater than summer weekend day (Saturday and Sunday) mid-day peak traffic volumes.
3. A time-series evaluation of weekday versus weekend traffic counts over the last six years in Marina Del Rey indicates that weekday evening peak hour traffic conditions are more severe than weekend conditions at almost all locations within the Marina.
4. A different data source with intersection traffic counts at locations both within and in the vicinity of the Marina was used in the comparison of weekday versus weekend day traffic conditions. This comparison indicates that the weekday evening peak hour traffic volumes is slightly greater than the weekend mid-day peak hour traffic volumes, on a system-wide basis.

Therefore, the evaluation conducted in the Raju Associates Traffic Study for the Marina Del Rey Local Coastal Program Amendment Project is representative of worst-case conditions analyses and that the improvement measures evaluated would serve both weekday and weekend conditions satisfactorily.

In addition to the comparative evaluation of recent traffic counts provided in the discussion above, an examination of historical research associated with weekday versus weekend conditions in the Marina and the use of appropriate trip generation rates and parameters for marina uses, has been made. Appendix E provides excerpts from the *Marina Del Rey Traffic Study, 1982, Gruen Associates* that evaluated and discussed the rationale for the use of weekday traffic conditions in the Marina. This study states on page 16, that,

"These figures indicate that weekday peak hour traffic generally represents the controlling (heavier) condition for planning and design of the Marina area transportation system. In addition, weekday traffic extends throughout the year, while heavy weekend traffic is limited to the summer months, thus providing justification for the use of weekday traffic demand as a basis for planning transportation improvements. Weekend traffic, however, requires special consideration due to the different mix of traffic including bicyclists, sight-seers and tourist drivers unfamiliar with the Marina del Rey area".

Further, based on current data, it can be observed that the same rationale still holds true. The weekday evening peak hour traffic conditions represent the controlling (heavier) condition for planning and design of Marina area transportation system.

The use of trip generation rates from the MDR LCP 1991/1994 traffic study document in this MDR LCP Amendment Traffic Study is also justified. The details of the analysis and conclusion relative to trip generation of marina uses are provided in the *"Marina Del Rey Traffic Study, Final Report, January 1991, DKS Associates, In Association with Gruen Associates"*. The relevant excerpts of the same are provided in Appendix F.

TABLE 1
COMPARISON OF SUMMER WEEKDAY VS. NON-SUMMER WEEKDAY TRAFFIC VOLUMES

	Location			Summer 2010 Weekday [1] PM Peak Hour	Non-Summer Commuter Weekday [2] PM Peak Hour
1	Fiji Way	e□o	Admiralty Way	1,625	1,816
2	Admiralty Way	n□o	Fiji Way	1,534	1,478
3	Bali Way	e□o	Admiralty Way	798	730
4	Mindanao Way	w□o	Admiralty Way	347	196
5	Marquesas Way	e□o	Via Marina	277	231
6	Via Marina	s□o	Admiralty Way	2,137	2,113
7	Via Marina	n□o	Tahiti Way	1,133	1,024
8	Admiralty Way	n□o	Mindanao Way	2,408	2,703
9	Admiralty Way	w□o	Palawan Way	2,515	2,603
10	Admiralty Way	w□o	Bali Way	3,046	2,709
11	Bali Way	w□o	Admiralty Way	191	123
12	Fiji Way	w□o	Admiralty Way	577	508
13	Palawan Way	n□o	Admiralty Way	506	819
14	Palawan Way	s□o	Admiralty Way	278	348
15	Panay Way	e□o	Via Marina	418	384
16	Tahiti	e□o	Via Marina	263	226
17	Via Marina	n□o	Admiralty Way	1,530	1,889
18	Via Marina	s□o	Panay Way	1,434	1,394
19	Via Marina	s□o	Tahiti Way	889	810
20	Admiralty Way	e□o	Palawan Way	2,774	2,892
21	Mindanao Way	e□o	Admiralty Way	1,496	1,338
			TOTAL SYSTEM-WIDE VOLUME	26,176	26,332
			Difference	-156	

Source:

[1] Traffic counts provided by Los Angeles County Department of Public Works, included in Appendix A.

[2] Traffic counts from *Traffic Study for the Marina del Rey Local Coastal Program Amendment*, Raju Associates, Inc., April 2010, included in Appendix B, Volume II. These traffic counts were conducted in 2009 and have been factored by 0.72□ to obtain comparable 2010 traffic volumes.

TABLE 2
SUMMER WEEKEND VS. NON-SUMMER WEEKDAY COMPARISON
PEAK HOUR VOLUMES

Location	Summer 2010 Mid-day Peak Hour [1]		Non-Summer Commuter Weekday PM Peak Hour [2]
	Saturday	Sunday	
1 Fiji Way e/o Admiralty Way	1,274	1,237	1,816
2 Admiralty Way n/o Fiji Way	1,200	1,107	1,478
3 Bali Way e/o Admiralty Way	809	756	730
4 Mindanao Way w/o Admiralty Way	337	349	196
5 Marquesas Way e/o Via Marina	327	289	231
6 Via Marina s/o Admiralty Way	2,119	2,199	2,113
7 Via Marina n/o Tahiti Way	1,395	1,449	1,024
8 Admiralty Way n/o Mindanao Way	2,046	1,894	2,703
9 Admiralty Way w/o Palawan Way	2,123	2,025	2,603
10 Admiralty Way w/o Bali Way	2,649	2,566	2,709
11 Bali Way w/o Admiralty Way	247	214	123
12 Fiji Way w/o Admiralty Way	756	750	508
13 Palawan Way n/o Admiralty Way	438	354	819
14 Palawan Way s/o Admiralty Way	318	344	348
15 Panay Way e/o Via Marina	393	400	384
16 Tahiti e/o Via Marina	248	264	226
17 Via Marina n/o Admiralty Way	1,237	1,205	1,889
18 Via Marina s/o Panay Way	1,498	1,497	1,394
19 Via Marina s/o Tahiti Way	903	948	810
20 Admiralty Way e/o Palawan Way	2,335	2,265	2,892
21 Mindanao Way e/o Admiralty Way	1,564	1,487	1,338
TOTAL SYSTEM-WIDE VOLUME	24,216	23,599	26,332
Difference	-2,116	-2,733	

Source:

[1] Traffic counts provided by Los Angeles County Department of Public Works, included in Appendix B.

[2] Traffic counts from *Traffic Study for the Marina del Rey Local Coastal Program Amendment*, Raju Associates, Inc., April 2010, included in Appendix B, Volume II. Theses traffic counts were conducted in 2009 and have been factored by 0.72 to obtain comparable 2010 traffic volumes.

TABLE 3
EXISTING PEAK HOUR TRAFFIC VOLUMES
TIME SERIES DATA EVALUATION [1]

Location	Peak Hour	Direction	2005		2006		2007		2008		2009		2010	
			Thursday [2]	Saturday [3]	Thursday [2]	Saturday [3]	Thursday [2]	Saturday [3]	Thursday [2]	Saturday [3]	Thursday [2]	Saturday [3]	Thursday [2]	Saturday [3]
1 Admiralty Way n□o Fiji Way	PM	North	838	763	719	603	750	607					663	613
		South	1,200	764	1,046	678	990	670					871	628
2 Admiralty Way e□o Mindanao Way	PM	East									840	564	1,203	1,123
		West									669	538	802	873
3 Admiralty Way n□o Mindanao Way	PM	North	1,188	1,046	1,252	1,061	1,170	1,005					1,195	1,097
		South	1,368	1,105	1,396	1,051	1,235	1,048					1,230	1,005
4 Admiralty Way e□o Bali Way	PM	East									1,206	989	1,266	934
		West									1,303	1,002	1,137	1,117
5 Admiralty Way w□o Bali Way	PM	East	1,523	1,170	1,491	1,216	1,436	1,232	1,387	1,179	1,348	1,100	1,397	1,267
		West	1,347	1,144	1,510	1,257	1,523	1,321	1,534	1,200	1,570	1,080	1,644	1,291
6 Admiralty Way e□o Palawan Way	PM	East	1,437	1,138	1,455	1,137					1,364	1,039	1,375	1,139
		West	1,221	1,066	1,341	1,079					1,373	976	1,316	1,272
7 Admiralty Way w□o Palawan Way	PM	East	1,080	1,009	1,114	1,008	1,107	933					1,213	1,054
		West	1,322	1,110	1,397	1,111	1,407	1,080					1,370	1,161
8 Admiralty Way e□o Via Marina	PM	East									1,253	983	1,217	1,076
		West									1,377	995	1,235	1,166

[1] Traffic counts provided by the Los Angeles County Department of Public Works, included in Appendix C.
[2] Thursday conditions are representative of weekday peak conditions.
[3] Saturday conditions are representative of weekend peak conditions.

TABLE 4
COMPARISON OF YEAR 2007 WEEKDAY VS. WEEKEND TRAFFIC CONDITIONS [1]

Intersection			Commuter Weekday PM Peak Hour Conditions			Saturday Mid-day Peak Hour Conditions		
			Volume	V/C	LOS [2]	Volume	V/C	LOS [2]
1	Admiralty Way	Bali Way	2,721	0.499	A	2,857	0.540	A
2	Lincoln Boulevard	Bali Way	3,876	0.594	A	3,751	0.543	A
3	Admiralty Way	Mindanao Way	2,762	0.603	B	2,924	0.677	B
4	Lincoln Boulevard	Mindanao Way	4,984	0.782	C	4,999	0.765	C
5	Admiralty Way	Fiji Way	1,995	0.447	A	1,787	0.403	A
6	Lincoln Boulevard	Fiji Way	5,294	0.821	D	4,810	0.777	C
7	SR-90 EB	Mindanao Way	3,088	0.805	D	3,166	0.723	C
8	SR-90 WB	Mindanao Way	3,263	0.677	B	3,200	0.768	C
9	Lincoln Boulevard	Maxella Avenue	5,268	0.640	B	5,277	0.730	C
10	Lincoln Boulevard	SR-90	5,056	0.745	C	5,089	0.781	C
		TOTAL SYSTEM-WIDE VOLUME	38,307			37,860		
		Difference				-447		

Source:

[1] Traffic counts from Traffic Study for Fisherman Village, provided by the Los Angeles County Department of Public Works, included in Appendix D.

[2] LOS data worksheets provided by Los Angeles County Department of Public Works.

APPENDIX A

AUGUST 2010 WEEKDAY MACHINE COUNTS – FROM LACDPW

Run Date: *08/25/2010*

Run Time: *9:09 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1A5-1A8

Page: 1

Count Date: 08/12/2010 12:00 am Thursday Condition: : Location: FIJI WAY E/O ADMIRALTY WAY

Align Coord:

	E/B		W/B		Total	
Time	15'	Hour	15'	Hour	15'	Hour
12:00 am	23	86	15	54	38	140
12:15 am	28	71	20	43	48	114
12:30 am	19	51	9	28	28	79
12:45 am	16	39	10	23	26	62
1:00 am	8	26	4	20	12	46
1:15 am	8	21	5	21	13	42
1:30 am	7	22	4	20	11	42
1:45 am	3	17	7	18	10	35
2:00 am	3	18	5	15	8	33
2:15 am	9	19	4	18	13	37
2:30 am	2	11	2	15	4	26
2:45 am	4	11	4	17	8	28
3:00 am	4	11	8	15	12	26
3:15 am	1	10	1	11	2	21
3:30 am	2	16	4	16	6	32
3:45 am	4	22	2	21	6	43
4:00 am	3	36	4	35	7	71
4:15 am	7	51	6	50	13	101
4:30 am	8	64	9	68	17	132
4:45 am	18	68	16	91	34	159
5:00 am	18	79	19	105	37	184
5:15 am	20	91	24	117	44	208
5:30 am	12	111	32	121	44	232
5:45 am	29	134	30	138	59	272
6:00 am	30	157	31	205	61	362
6:15 am	40	204	28	250	68	454
6:30 am	35	243	49	331	84	574
6:45 am	52	297	97	379	149	676
7:00 am	77	363	76	426	153	789
7:15 am	79	406	109	476	188	882
7:30 am	89	452	97	487	186	939
7:45 am	118	502	144	546	262	1048
8:00 am	120	528	126	558	246	1086
8:15 am	125	548	120	546	245	1094
8:30 am	139	569	156	541	295	1110
8:45 am	144	567	156	491	300	1058
9:00 am	140	549	114	422	254	971
9:15 am	146	511	115	384	261	895
9:30 am	137	473	106	355	243	828
9:45 am	126	451	87	347	213	798
10:00 am	102	437	76	350	178	787
10:15 am	108	430	86	362	194	792
10:30 am	115	420	98	370	213	790
10:45 am	112	412	90	380	202	792
11:00 am	95	418	88	410	183	828
11:15 am	98	436	94	449	192	885
11:30 am	107	476	108	463	215	939
11:45 am	118	485	120	493	238	978
12:00 pm	113	511	127	524	240	1035
12:15 pm	138	538	108	520	246	1058
12:30 pm	116	550	138	530	254	1080
12:45 pm	144	604	151	516	295	1120
1:00 pm	140	607	123	507	263	1114
1:15 pm	150	601	118	512	268	1113
1:30 pm	170	597	124	537	294	1134
1:45 pm	147	577	142	531	289	1108
2:00 pm	134	563	128	505	262	1068
2:15 pm	146	612	143	517	289	1129
2:30 pm	150	653	118	494	268	1147
2:45 pm	133	673	116	496	249	1169
3:00 pm	183	716	140	500	323	1216
3:15 pm	187	747	120	514	307	1261
3:30 pm	170	785	120	554	290	1339
3:45 pm	176	811	120	594	296	1405
4:00 pm	214	829	154	626	368	1455
4:15 pm	225	838	160	630	385	1468
4:30 pm	196	834	160	624	356	1458
4:45 pm	194	848	152	646	346	1494
5:00 pm	223	911	158	682	381	1593
5:15 pm	221	936	154	688	375	1624
5:30 pm	210	915	182	710	392	1625
5:45 pm	257	907	188	684	445	1591
6:00 pm	248	857	164	650	412	1507
6:15 pm	200	813	176	630	376	1443
6:30 pm	202	815	156	566	358	1381
6:45 pm	207	763	154	532	361	1295
7:00 pm	204	712	144	498	348	1210
7:15 pm	202	654	112	460	314	1114
7:30 pm	150	578	122	432	272	1010
7:45 pm	156	528	120	416	276	944
8:00 pm	146	478	106	374	252	852
8:15 pm	126	426	84	355	210	781
8:30 pm	100	396	106	339	206	735
8:45 pm	106	369	78	294	184	663
9:00 pm	94	322	87	278	181	600
9:15 pm	96	310	68	247	164	557
9:30 pm	73	307	61	237	134	544
9:45 pm	59	303	62	208	121	511
10:00 pm	82	280	56	178	138	458
10:15 pm	93	239	58	155	151	394
10:30 pm	69	181	32	117	101	298
10:45 pm	36	142	32	103	68	245
11:00 pm	41	142	33	85	74	227
11:15 pm	35		20		55	
11:30 pm	30		18		48	
11:45 pm	36		14		50	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	17658	8:30 am	1110	5:30 pm	1625
E/B	9636	8:30 am	569	5:15 pm	936
W/B	8022	8:00 am	558	5:30 pm	710

Run Date: *08/25/2010*
Run Time: *9:07 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: Z89-Z92
Page: 1

Count Date: 08/12/2010 12:00 am Thursday   Condition: :   Location: ADMIRALTY WAY N/O MINDANAO WAY
Align Coord:

Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour	Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour
12:00 am	51	152	35	142	86	294	12:00 pm	242	948	203	804	445	1752
12:15 am	33	124	38	126	71	250	12:15 pm	214	927	210	803	424	1730
12:30 am	34	114	28	115	62	229	12:30 pm	258	949	178	833	436	1782
12:45 am	34	94	41	96	75	190	12:45 pm	234	909	213	871	447	1780
1:00 am	23	83	19	63	42	146	1:00 pm	221	939	202	879	423	1818
1:15 am	23	70	27	52	50	122	1:15 pm	236	939	240	876	476	1815
1:30 am	14	63	9	40	23	103	1:30 pm	218	941	216	870	434	1811
1:45 am	23	61	8	41	31	102	1:45 pm	264	971	221	881	485	1852
2:00 am	10	44	8	41	18	85	2:00 pm	221	943	199	870	420	1813
2:15 am	16	42	15	38	31	80	2:15 pm	238	979	234	922	472	1901
2:30 am	12	34	10	27	22	61	2:30 pm	248	1003	227	919	475	1922
2:45 am	6	30	8	24	14	54	2:45 pm	236	957	210	950	446	1907
3:00 am	8	31	5	21	13	52	3:00 pm	257	946	251	1012	508	1958
3:15 am	8	28	4	26	12	54	3:15 pm	262	929	231	1040	493	1969
3:30 am	8	28	7	32	15	60	3:30 pm	202	927	258	1081	460	2008
3:45 am	7	37	5	42	12	79	3:45 pm	225	993	272	1076	497	2069
4:00 am	5	48	10	61	15	109	4:00 pm	240	1067	279	1057	519	2124
4:15 am	8	53	10	80	18	133	4:15 pm	260	1088	272	1094	532	2182
4:30 am	17	77	17	106	34	183	4:30 pm	268	1110	253	1135	521	2245
4:45 am	18	101	24	139	42	240	4:45 pm	299	1150	253	1174	552	2324
5:00 am	10	131	29	163	39	294	5:00 pm	261	1161	316	1235	577	2396
5:15 am	32	169	36	189	68	358	5:15 pm	282	1208	313	1200	595	2408
5:30 am	41	183	50	226	91	409	5:30 pm	308	1226	292	1150	600	2376
5:45 am	48	221	48	262	96	483	5:45 pm	310	1218	314	1097	624	2315
6:00 am	48	289	55	308	103	597	6:00 pm	308	1198	281	1038	589	2236
6:15 am	46	371	73	380	119	751	6:15 pm	300	1159	263	989	563	2148
6:30 am	79	479	86	451	165	930	6:30 pm	300	1090	239	960	539	2050
6:45 am	116	582	94	547	210	1129	6:45 pm	290	1048	255	927	545	1975
7:00 am	130	702	127	649	257	1351	7:00 pm	269	1001	232	880	501	1881
7:15 am	154	830	144	723	298	1553	7:15 pm	231	926	234	842	465	1768
7:30 am	182	904	182	812	364	1716	7:30 pm	258	882	206	778	464	1660
7:45 am	236	984	196	861	432	1845	7:45 pm	243	834	208	728	451	1562
8:00 am	258	998	201	905	459	1903	8:00 pm	194	761	194	680	388	1441
8:15 am	228	972	233	936	461	1908	8:15 pm	187	731	170	626	357	1357
8:30 am	262	952	231	927	493	1879	8:30 pm	210	719	156	596	366	1315
8:45 am	250	909	240	920	490	1829	8:45 pm	170	652	160	566	330	1218
9:00 am	232	903	232	898	464	1801	9:00 pm	164	616	140	497	304	1113
9:15 am	208	859	224	880	432	1739	9:15 pm	175	582	140	468	315	1050
9:30 am	219	823	224	844	443	1667	9:30 pm	143	514	126	436	269	950
9:45 am	244	800	218	812	462	1612	9:45 pm	134	479	91	414	225	893
10:00 am	188	748	214	755	402	1503	10:00 pm	130	428	111	407	241	835
10:15 am	172	730	188	717	360	1447	10:15 pm	107	370	108	371	215	741
10:30 am	196	750	192	721	388	1471	10:30 pm	108	319	104	325	212	644
10:45 am	192	772	161	719	353	1491	10:45 pm	83	272	84	271	167	543
11:00 am	170	811	176	768	346	1579	11:00 pm	72	232	75	226	147	458
11:15 am	192	883	192	795	384	1678	11:15 pm	56		62		118	
11:30 am	218	905	190	813	408	1718	11:30 pm	61		50		111	
11:45 am	231	945	210	801	441	1746	11:45 pm	43		39		82	

24 Hour Direction	Volume	AM Peak Hour Time	Volume	PM Peak Hour Time	Volume
Total	29539	8:15 am	1908	5:15 pm	2408
N/B	15180	8:00 am	998	5:30 pm	1226
S/B	14359	8:15 am	936	5:00 pm	1235

Run Date: *08/25/2010*

Run Time: *9:07 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: Z85-Z88
Page: 1

Count Date: 08/12/2010 12:00 am Thursday   Condition: :   Location: ADMIRALTY WAY N/O FIJI WAY

Align Coord:

	N/B		S/B		Total			N/B		S/B		Total	
Time	15'	Hour	15'	Hour	15'	Hour	Time	15'	Hour	15'	Hour	15'	Hour
12:00 am	22	62	12	66	34	128	12:00 pm	124	525	120	478	244	1003
12:15 am	20	44	20	61	40	105	12:15 pm	98	535	124	479	222	1014
12:30 am	9	28	16	49	25	77	12:30 pm	157	581	94	515	251	1096
12:45 am	11	23	18	40	29	63	12:45 pm	146	554	140	547	286	1101
1:00 am	4	18	7	23	11	41	1:00 pm	134	570	121	533	255	1103
1:15 am	4	18	8	21	12	39	1:15 pm	144	570	160	523	304	1093
1:30 am	4	19	7	20	11	39	1:30 pm	130	580	126	499	256	1079
1:45 am	6	19	1	16	7	35	1:45 pm	162	574	126	494	288	1068
2:00 am	4	17	5	20	9	37	2:00 pm	134	530	111	486	245	1016
2:15 am	5	17	7	19	12	36	2:15 pm	154	557	136	539	290	1096
2:30 am	4	13	3	16	7	29	2:30 pm	124	542	121	569	245	1111
2:45 am	4	13	5	16	9	29	2:45 pm	118	541	118	595	236	1136
3:00 am	4	10	4	12	8	22	3:00 pm	161	546	164	647	325	1193
3:15 am	1	6	4	9	5	15	3:15 pm	139	533	166	649	305	1182
3:30 am	4	11	3	13	7	24	3:30 pm	123	550	147	665	270	1215
3:45 am	1	17	1	18	2	35	3:45 pm	123	591	170	704	293	1295
4:00 am	0	27	1	31	1	58	4:00 pm	148	629	166	708	314	1337
4:15 am	6	30	8	49	14	79	4:15 pm	156	637	182	750	338	1387
4:30 am	10	36	8	65	18	101	4:30 pm	164	641	186	785	350	1426
4:45 am	11	42	14	79	25	121	4:45 pm	161	644	174	803	335	1447
5:00 am	3	47	19	91	22	138	5:00 pm	156	663	208	871	364	1534
5:15 am	12	68	24	104	36	172	5:15 pm	160	661	217	861	377	1522
5:30 am	16	82	22	123	38	205	5:30 pm	167	661	204	818	371	1479
5:45 am	16	98	26	146	42	244	5:45 pm	180	661	242	778	422	1439
6:00 am	24	154	32	190	56	344	6:00 pm	154	631	198	712	352	1343
6:15 am	26	202	43	227	69	429	6:15 pm	160	607	174	682	334	1289
6:30 am	32	262	45	271	77	533	6:30 pm	167	568	164	674	331	1242
6:45 am	72	322	70	310	142	632	6:45 pm	150	521	176	625	326	1146
7:00 am	72	369	69	355	141	724	7:00 pm	130	500	168	591	298	1091
7:15 am	86	421	87	410	173	831	7:15 pm	121	479	166	549	287	1028
7:30 am	92	451	84	453	176	904	7:30 pm	120	451	115	475	235	926
7:45 am	119	497	115	497	234	994	7:45 pm	129	436	142	454	271	890
8:00 am	124	522	124	513	248	1035	8:00 pm	109	372	126	403	235	775
8:15 am	116	524	130	516	246	1040	8:15 pm	93	347	92	362	185	709
8:30 am	138	528	128	518	266	1046	8:30 pm	105	326	94	334	199	660
8:45 am	144	498	131	535	275	1033	8:45 pm	65	277	91	290	156	567
9:00 am	126	489	127	530	253	1019	9:00 pm	84	276	85	253	169	529
9:15 am	120	453	132	515	252	968	9:15 pm	72	245	64	227	136	472
9:30 am	108	415	145	481	253	896	9:30 pm	56	219	50	235	106	454
9:45 am	135	389	126	446	261	835	9:45 pm	64	201	54	237	118	438
10:00 am	90	342	112	422	202	764	10:00 pm	53	173	59	220	112	393
10:15 am	82	333	98	400	180	733	10:15 pm	46	152	72	191	118	343
10:30 am	82	350	110	410	192	760	10:30 pm	38	134	52	153	90	287
10:45 am	88	374	102	403	190	777	10:45 pm	36	117	37	127	73	244
11:00 am	81	401	90	419	171	820	11:00 pm	32	97	30	108	62	205
11:15 am	99	444	108	449	207	893	11:15 pm	28		34		62	
11:30 am	106	443	103	465	209	908	11:30 pm	21		26		47	
11:45 am	115	494	118	456	233	950	11:45 pm	16		18		34	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	16652	8:30 am	1046	5:00 pm	1534
N/B	7970	8:30 am	528	5:00 pm	663
S/B	8682	8:45 am	535	5:00 pm	871

Run Date: *08/25/2010*

Run Time: *9:07 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: Z93-Z96

Page: 1

Count Date: 08/12/2010 12:00 am Thursday   Condition: :   Location: ADMIRALTY WAY W/O PALAWAN WAY

Align Coord:

Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour	Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour
12:00 am	36	147	64	167	100	314	12:00 pm	220	865	218	898	438	1763
12:15 am	38	137	34	132	72	269	12:15 pm	223	827	210	872	433	1699
12:30 am	29	120	36	119	65	239	12:30 pm	194	836	218	858	412	1694
12:45 am	44	104	33	99	77	203	12:45 pm	228	860	252	866	480	1726
1:00 am	26	73	29	89	55	162	1:00 pm	182	846	192	834	374	1680
1:15 am	21	57	21	84	42	141	1:15 pm	232	847	196	892	428	1739
1:30 am	13	54	16	83	29	137	1:30 pm	218	842	226	908	444	1750
1:45 am	13	50	23	78	36	128	1:45 pm	214	840	220	897	434	1737
2:00 am	10	46	24	70	34	116	2:00 pm	183	828	250	902	433	1730
2:15 am	18	42	20	59	38	101	2:15 pm	227	893	212	873	439	1766
2:30 am	9	32	11	44	20	76	2:30 pm	216	901	215	895	431	1796
2:45 am	9	29	15	46	24	75	2:45 pm	202	933	225	936	427	1869
3:00 am	6	26	13	45	19	71	3:00 pm	248	990	221	929	469	1919
3:15 am	8	29	5	42	13	71	3:15 pm	235	1008	234	914	469	1922
3:30 am	6	32	13	47	19	79	3:30 pm	248	1029	256	952	504	1981
3:45 am	6	47	14	47	20	94	3:45 pm	259	1043	218	970	477	2013
4:00 am	9	67	10	44	19	111	4:00 pm	266	1048	206	1050	472	2098
4:15 am	11	84	10	42	21	126	4:15 pm	256	1090	272	1119	528	2209
4:30 am	21	99	13	50	34	149	4:30 pm	262	1134	274	1141	536	2275
4:45 am	26	118	11	54	37	172	4:45 pm	264	1188	298	1166	562	2354
5:00 am	26	133	8	85	34	218	5:00 pm	308	1213	275	1218	583	2431
5:15 am	26	179	18	117	44	296	5:15 pm	300	1201	294	1314	594	2515
5:30 am	40	225	17	140	57	365	5:30 pm	316	1153	299	1342	615	2495
5:45 am	41	285	42	179	83	464	5:45 pm	289	1067	350	1370	639	2437
6:00 am	72	360	40	215	112	575	6:00 pm	296	1040	371	1330	667	2370
6:15 am	72	426	41	271	113	697	6:15 pm	252	1000	322	1276	574	2276
6:30 am	100	513	56	355	156	868	6:30 pm	230	989	327	1280	557	2269
6:45 am	116	633	78	453	194	1086	6:45 pm	262	975	310	1231	572	2206
7:00 am	138	749	96	583	234	1332	7:00 pm	256	937	317	1201	573	2138
7:15 am	159	845	125	671	284	1516	7:15 pm	241	874	326	1130	567	2004
7:30 am	220	949	154	770	374	1719	7:30 pm	216	783	278	1037	494	1820
7:45 am	232	1010	208	850	440	1860	7:45 pm	224	709	280	989	504	1698
8:00 am	234	1062	184	872	418	1934	8:00 pm	193	633	246	906	439	1539
8:15 am	263	1076	224	882	487	1958	8:15 pm	150	569	233	875	383	1444
8:30 am	281	1082	234	842	515	1924	8:30 pm	142	549	230	809	372	1358
8:45 am	284	1041	230	823	514	1864	8:45 pm	148	537	197	754	345	1291
9:00 am	248	981	194	759	442	1740	9:00 pm	129	477	215	715	344	1192
9:15 am	269	952	184	743	453	1695	9:15 pm	130	464	167	634	297	1098
9:30 am	240	883	215	705	455	1588	9:30 pm	130	422	175	587	305	1009
9:45 am	224	829	166	656	390	1485	9:45 pm	88	404	158	547	246	951
10:00 am	219	803	178	669	397	1472	10:00 pm	116	398	134	501	250	899
10:15 am	200	766	146	643	346	1409	10:15 pm	88	370	120	451	208	821
10:30 am	186	734	166	659	352	1393	10:30 pm	112	355	135	401	247	756
10:45 am	198	761	179	714	377	1475	10:45 pm	82	296	112	333	194	629
11:00 am	182	791	152	746	334	1537	11:00 pm	88	256	84	277	172	533
11:15 am	168	829	162	812	330	1641	11:15 pm	73		70		143	
11:30 am	213	884	221	860	434	1744	11:30 pm	53		67		120	
11:45 am	228	865	211	857	439	1722	11:45 pm	42		56		98	

24 Hour Direction	Volume	AM Peak Hour Time	Volume	PM Peak Hour Time	Volume
Total	29874	8:15 am	1958	5:15 pm	2515
E/B	14769	8:30 am	1082	5:00 pm	1213
W/B	15105	8:15 am	882	5:45 pm	1370

Run Date: *08/25/2010*

Run Time: *9:07 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: Z97-1A0

Page: 1

Count Date: 08/12/2010 12:00 am Thursday Condition: : Location: BALI WAY E/O ADMIRALTY WAY

Align Coord:

Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour	Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour
12:00 am	19	51	16	56	35	107	12:00 pm	79	316	80	360	159	676
12:15 am	12	38	16	57	28	95	12:15 pm	74	305	104	366	178	671
12:30 am	10	40	10	49	20	89	12:30 pm	81	323	88	352	169	675
12:45 am	10	36	14	51	24	87	12:45 pm	82	336	88	342	170	678
1:00 am	6	27	17	45	23	72	1:00 pm	68	332	86	330	154	662
1:15 am	14	23	8	42	22	65	1:15 pm	92	336	90	339	182	675
1:30 am	6	15	12	44	18	59	1:30 pm	94	318	78	331	172	649
1:45 am	1	13	8	37	9	50	1:45 pm	78	314	76	331	154	645
2:00 am	2	14	14	33	16	47	2:00 pm	72	320	95	327	167	647
2:15 am	6	15	10	23	16	38	2:15 pm	74	336	82	304	156	640
2:30 am	4	11	5	16	9	27	2:30 pm	90	353	78	307	168	660
2:45 am	2	9	4	19	6	28	2:45 pm	84	343	72	305	156	648
3:00 am	3	11	4	29	7	40	3:00 pm	88	337	72	305	160	642
3:15 am	2	8	3	27	5	35	3:15 pm	91	335	85	295	176	630
3:30 am	2	7	8	26	10	33	3:30 pm	80	327	76	308	156	635
3:45 am	4	13	14	24	18	37	3:45 pm	78	328	72	338	150	666
4:00 am	0	11	2	19	2	30	4:00 pm	86	326	62	364	148	690
4:15 am	1	17	2	29	3	46	4:15 pm	83	342	98	398	181	740
4:30 am	8	17	6	32	14	49	4:30 pm	81	359	106	389	187	748
4:45 am	2	18	9	42	11	60	4:45 pm	76	378	98	397	174	775
5:00 am	6	28	12	54	18	82	5:00 pm	102	371	96	413	198	784
5:15 am	1	38	5	56	6	94	5:15 pm	100	357	89	441	189	798
5:30 am	9	63	16	75	25	138	5:30 pm	100	323	114	472	214	795
5:45 am	12	80	21	100	33	180	5:45 pm	69	279	114	467	183	746
6:00 am	16	96	14	115	30	211	6:00 pm	88	280	124	441	212	721
6:15 am	26	118	24	137	50	255	6:15 pm	66	264	120	407	186	671
6:30 am	26	135	41	149	67	284	6:30 pm	56	258	109	401	165	659
6:45 am	28	157	36	147	64	304	6:45 pm	70	262	88	363	158	625
7:00 am	38	201	36	163	74	364	7:00 pm	72	257	90	371	162	628
7:15 am	43	221	36	168	79	389	7:15 pm	60	253	114	361	174	614
7:30 am	48	256	39	198	87	454	7:30 pm	60	255	71	315	131	570
7:45 am	72	282	52	228	124	510	7:45 pm	65	253	96	310	161	563
8:00 am	58	276	41	254	99	530	8:00 pm	68	248	80	277	148	525
8:15 am	78	290	66	284	144	574	8:15 pm	62	245	68	260	130	505
8:30 am	74	292	69	288	143	580	8:30 pm	58	235	66	244	124	479
8:45 am	66	300	78	284	144	584	8:45 pm	60	235	63	232	123	467
9:00 am	72	288	71	282	143	570	9:00 pm	65	235	63	239	128	474
9:15 am	80	284	70	271	150	555	9:15 pm	52	214	52	232	104	446
9:30 am	82	274	65	255	147	529	9:30 pm	58	202	54	223	112	425
9:45 am	54	244	76	251	130	495	9:45 pm	60	175	70	213	130	388
10:00 am	68	258	60	248	128	506	10:00 pm	44	169	56	185	100	354
10:15 am	70	277	54	266	124	543	10:15 pm	40	149	43	156	83	305
10:30 am	52	277	61	286	113	563	10:30 pm	31	134	44	143	75	277
10:45 am	68	297	73	313	141	610	10:45 pm	54	130	42	127	96	257
11:00 am	87	305	78	342	165	647	11:00 pm	24	92	27	116	51	208
11:15 am	70	297	74	344	144	641	11:15 pm	25		30		55	
11:30 am	72	301	88	374	160	675	11:30 pm	27		28		55	
11:45 am	76	310	102	374	178	684	11:45 pm	16		31		47	

24 Hour Direction	Volume	AM Peak Hour Time	Volume	PM Peak Hour Time	Volume
Total	10217	11:45 am	684	5:15 pm	798
E/B	4849	11:45 am	310	4:45 pm	378
W/B	5368	11:30 am	374	5:30 pm	472

Run Date: *08/25/2010*

Run Time: *9:06 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: Y37-Y42
Page: 1

Count Date: 07/29/2010 12:00 am Thursday   Condition: :   Location: ADMIRALTY WAY W/O BALI WAY

Align Coord:

	E/B		W/B		Total			E/B		W/B		Total	
Time	15'	Hour	15'	Hour	15'	Hour	Time	15'	Hour	15'	Hour	15'	Hour
12:00 am	40	152	62	170	102	322	12:00 pm	214	1000	252	1086	466	2086
12:15 am	54	139	44	149	98	288	12:15 pm	256	1018	296	1110	552	2128
12:30 am	31	101	47	123	78	224	12:30 pm	264	1034	250	1064	514	2098
12:45 am	27	89	17	89	44	178	12:45 pm	266	1036	288	1084	554	2120
1:00 am	27	84	41	94	68	178	1:00 pm	232	1069	276	1101	508	2170
1:15 am	16	75	18	75	34	150	1:15 pm	272	1089	250	1093	522	2182
1:30 am	19	66	13	74	32	140	1:30 pm	266	1091	270	1113	536	2204
1:45 am	22	56	22	66	44	122	1:45 pm	299	1114	305	1129	604	2243
2:00 am	18	41	22	53	40	94	2:00 pm	252	1108	268	1102	520	2210
2:15 am	7	33	17	42	24	75	2:15 pm	274	1133	270	1120	544	2253
2:30 am	9	36	5	30	14	66	2:30 pm	289	1173	286	1150	575	2323
2:45 am	7	29	9	33	16	62	2:45 pm	293	1224	278	1172	571	2396
3:00 am	10	32	11	30	21	62	3:00 pm	277	1253	286	1216	563	2469
3:15 am	10	33	5	35	15	68	3:15 pm	314	1336	300	1254	614	2590
3:30 am	2	34	8	42	10	76	3:30 pm	340	1378	308	1324	648	2702
3:45 am	10	53	6	55	16	108	3:45 pm	322	1368	322	1364	644	2732
4:00 am	11	77	16	71	27	148	4:00 pm	360	1397	324	1399	684	2796
4:15 am	11	100	12	78	23	178	4:15 pm	356	1391	370	1477	726	2868
4:30 am	21	124	21	107	42	231	4:30 pm	330	1377	348	1497	678	2874
4:45 am	34	141	22	137	56	278	4:45 pm	351	1417	357	1561	708	2978
5:00 am	34	182	23	167	57	349	5:00 pm	354	1398	402	1616	756	3014
5:15 am	35	242	41	213	76	455	5:15 pm	342	1393	390	1626	732	3019
5:30 am	38	294	51	248	89	542	5:30 pm	370	1378	412	1668	782	3046
5:45 am	75	383	52	289	127	672	5:45 pm	332	1338	412	1692	744	3030
6:00 am	94	462	69	356	163	818	6:00 pm	349	1295	412	1653	761	2948
6:15 am	87	538	76	418	163	956	6:15 pm	327	1258	432	1635	759	2893
6:30 am	127	627	92	523	219	1150	6:30 pm	330	1217	436	1543	766	2760
6:45 am	154	755	119	650	273	1405	6:45 pm	289	1169	373	1464	662	2633
7:00 am	170	883	131	781	301	1664	7:00 pm	312	1149	394	1403	706	2552
7:15 am	176	965	181	888	357	1853	7:15 pm	286	1053	340	1283	626	2336
7:30 am	255	1078	219	943	474	2021	7:30 pm	282	1004	357	1225	639	2229
7:45 am	282	1145	250	994	532	2139	7:45 pm	269	939	312	1112	581	2051
8:00 am	252	1237	238	1053	490	2290	8:00 pm	216	857	274	1003	490	1860
8:15 am	289	1281	236	1047	525	2328	8:15 pm	237	830	282	932	519	1762
8:30 am	322	1306	270	1033	592	2339	8:30 pm	217	784	244	873	461	1657
8:45 am	374	1259	309	1007	683	2266	8:45 pm	187	763	203	823	390	1586
9:00 am	296	1129	232	932	528	2061	9:00 pm	189	748	203	812	392	1560
9:15 am	314	1069	222	905	536	1974	9:15 pm	191	691	223	789	414	1480
9:30 am	275	1003	244	890	519	1893	9:30 pm	196	636	194	704	390	1340
9:45 am	244	966	234	862	478	1828	9:45 pm	172	576	192	661	364	1237
10:00 am	236	935	205	854	441	1789	10:00 pm	132	532	180	593	312	1125
10:15 am	248	956	207	875	455	1831	10:15 pm	136	496	138	523	274	1019
10:30 am	238	928	216	912	454	1840	10:30 pm	136	472	151	471	287	943
10:45 am	213	891	226	961	439	1852	10:45 pm	128	412	124	406	252	818
11:00 am	257	911	226	987	483	1898	11:00 pm	96	353	110	364	206	717
11:15 am	220	868	244	1013	464	1881	11:15 pm	112		86		198	
11:30 am	201	904	265	1065	466	1969	11:30 pm	76		86		162	
11:45 am	233	967	252	1050	485	2017	11:45 pm	69		82		151	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	37180	8:30 am	2339	5:30 pm	3046
E/B	18284	8:30 am	1306	4:45 pm	1417
W/B	18896	11:30 am	1065	5:45 pm	1692

Run Date: *08/25/2010*
Run Time: *9:08 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1A1-1A4
Page: 1

Count Date: 08/12/2010 12:00 am Thursday   Condition: :   Location: BALI WAY W/O ADMIRALTY WAY
Align Coord:

Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour	Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour
12:00 am	6	10	1	10	7	20	12:00 pm	24	83	20	85	44	168
12:15 am	0	6	4	11	4	17	12:15 pm	15	87	21	82	36	169
12:30 am	0	9	2	11	2	20	12:30 pm	18	94	22	81	40	175
12:45 am	4	11	3	9	7	20	12:45 pm	26	115	22	76	48	191
1:00 am	2	7	2	10	4	17	1:00 pm	28	109	17	74	45	183
1:15 am	3	6	4	10	7	16	1:15 pm	22	88	20	75	42	163
1:30 am	2	3	0	7	2	10	1:30 pm	39	80	17	71	56	151
1:45 am	0	2	4	7	4	9	1:45 pm	20	64	20	71	40	135
2:00 am	1	2	2	3	3	5	2:00 pm	7	59	18	70	25	129
2:15 am	0	2	1	2	1	4	2:15 pm	14	67	16	64	30	131
2:30 am	1	3	0	1	1	4	2:30 pm	23	69	17	67	40	136
2:45 am	0	2	0	2	0	4	2:45 pm	15	61	19	66	34	127
3:00 am	1	3	1	3	2	6	3:00 pm	15	58	12	63	27	121
3:15 am	1	6	0	3	1	9	3:15 pm	16	63	19	68	35	131
3:30 am	0	5	1	3	1	8	3:30 pm	15	61	16	69	31	130
3:45 am	1	5	1	3	2	8	3:45 pm	12	67	16	70	28	137
4:00 am	4	5	1	4	5	9	4:00 pm	20	67	17	68	37	135
4:15 am	0	5	0	8	0	13	4:15 pm	14	79	20	73	34	152
4:30 am	0	6	1	8	1	14	4:30 pm	21	93	17	71	38	164
4:45 am	1	10	2	11	3	21	4:45 pm	12	86	14	70	26	156
5:00 am	4	12	5	14	9	26	5:00 pm	32	95	22	72	54	167
5:15 am	1	9	0	11	1	20	5:15 pm	28	90	18	67	46	157
5:30 am	4	14	4	14	8	28	5:30 pm	14	88	16	57	30	145
5:45 am	3	14	5	15	8	29	5:45 pm	21	92	16	53	37	145
6:00 am	1	15	2	20	3	35	6:00 pm	27	85	17	51	44	136
6:15 am	6	25	3	24	9	49	6:15 pm	26	80	8	47	34	127
6:30 am	4	27	5	35	9	62	6:30 pm	18	68	12	48	30	116
6:45 am	4	33	10	43	14	76	6:45 pm	14	60	14	46	28	106
7:00 am	11	36	6	47	17	83	7:00 pm	22	59	13	52	35	111
7:15 am	8	41	14	51	22	92	7:15 pm	14	51	9	43	23	94
7:30 am	10	47	13	47	23	94	7:30 pm	10	49	10	53	20	102
7:45 am	7	61	14	48	21	109	7:45 pm	13	47	20	50	33	97
8:00 am	16	65	10	52	26	117	8:00 pm	14	45	4	40	18	85
8:15 am	14	72	10	56	24	128	8:15 pm	12	42	19	50	31	92
8:30 am	24	79	14	67	38	146	8:30 pm	8	36	7	43	15	79
8:45 am	11	71	18	64	29	135	8:45 pm	11	33	10	47	21	80
9:00 am	23	84	14	72	37	156	9:00 pm	11	29	14	53	25	82
9:15 am	21	73	21	73	42	146	9:15 pm	6	23	12	51	18	74
9:30 am	16	72	11	62	27	134	9:30 pm	5	23	11	47	16	70
9:45 am	24	74	26	61	50	135	9:45 pm	7	21	16	45	23	66
10:00 am	12	76	15	59	27	135	10:00 pm	5	27	12	40	17	67
10:15 am	20	85	10	62	30	147	10:15 pm	6	25	8	37	14	62
10:30 am	18	94	10	75	28	169	10:30 pm	3	20	9	33	12	53
10:45 am	26	98	24	80	50	178	10:45 pm	13	21	11	29	24	50
11:00 am	21	90	18	77	39	167	11:00 pm	3	10	9	24	12	34
11:15 am	29	93	23	79	52	172	11:15 pm	1		4		5	
11:30 am	22	79	15	77	37	156	11:30 pm	4		5		9	
11:45 am	18	75	21	84	39	159	11:45 pm	2		6		8	

24 Hour Direction	Volume	AM Peak Hour Time	Volume	PM Peak Hour Time	Volume
Total	2194	10:45 am	178	12:45 pm	191
E/B	1131	10:45 am	98	12:45 pm	115
W/B	1063	11:45 am	84	12:00 pm	85

Run Date: *08/25/2010*

Run Time: *9:16 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1B3-1B6
Page: 1

Count Date: 08/12/2010 12:00 am Thursday Condition: : Location: MARQUESAS WAY E/O VIA MARINA
Align Coord:

Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour	Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour
12:00 am	13	39	3	17	16	56	12:00 pm	27	107	44	145	71	252
12:15 am	13	30	5	16	18	46	12:15 pm	24	103	36	119	60	222
12:30 am	7	19	4	16	11	35	12:30 pm	20	104	28	111	48	215
12:45 am	6	17	5	14	11	31	12:45 pm	36	117	37	107	73	224
1:00 am	4	17	2	11	6	28	1:00 pm	23	108	18	100	41	208
1:15 am	2	17	5	10	7	27	1:15 pm	25	116	28	124	53	240
1:30 am	5	19	2	5	7	24	1:30 pm	33	126	24	129	57	255
1:45 am	6	17	2	3	8	20	1:45 pm	27	116	30	136	57	252
2:00 am	4	14	1	3	5	17	2:00 pm	31	113	42	131	73	244
2:15 am	4	13	0	3	4	16	2:15 pm	35	114	33	111	68	225
2:30 am	3	11	0	4	3	15	2:30 pm	23	110	31	105	54	215
2:45 am	3	8	2	11	5	19	2:45 pm	24	128	25	97	49	225
3:00 am	3	7	1	10	4	17	3:00 pm	32	132	22	96	54	228
3:15 am	2	5	1	11	3	16	3:15 pm	31	138	27	113	58	251
3:30 am	0	4	7	10	7	14	3:30 pm	41	143	23	110	64	253
3:45 am	2	4	1	9	3	13	3:45 pm	28	133	24	119	52	252
4:00 am	1	3	2	12	3	15	4:00 pm	38	142	39	127	77	269
4:15 am	1	3	0	12	1	15	4:15 pm	36	133	24	116	60	249
4:30 am	0	4	6	18	6	22	4:30 pm	31	139	32	130	63	269
4:45 am	1	8	4	19	5	27	4:45 pm	37	141	32	128	69	269
5:00 am	1	8	2	28	3	36	5:00 pm	29	142	28	127	57	269
5:15 am	2	8	6	39	8	47	5:15 pm	42	158	38	119	80	277
5:30 am	4	12	7	49	11	61	5:30 pm	33	164	30	113	63	277
5:45 am	1	11	13	54	14	65	5:45 pm	38	156	31	99	69	255
6:00 am	1	16	13	57	14	73	6:00 pm	45	158	20	98	65	256
6:15 am	6	21	16	70	22	91	6:15 pm	48	149	32	109	80	258
6:30 am	3	25	12	96	15	121	6:30 pm	25	144	16	104	41	248
6:45 am	6	37	16	122	22	159	6:45 pm	40	163	30	105	70	268
7:00 am	6	43	26	150	32	193	7:00 pm	36	163	31	99	67	262
7:15 am	10	46	42	168	52	214	7:15 pm	43	169	27	91	70	260
7:30 am	15	53	38	173	53	226	7:30 pm	44	165	17	80	61	245
7:45 am	12	64	44	181	56	245	7:45 pm	40	151	24	77	64	228
8:00 am	9	67	44	185	53	252	8:00 pm	42	146	23	68	65	214
8:15 am	17	73	47	189	64	262	8:15 pm	39	137	16	65	55	202
8:30 am	26	74	46	182	72	256	8:30 pm	30	120	14	67	44	187
8:45 am	15	65	48	174	63	239	8:45 pm	35	119	15	74	50	193
9:00 am	15	79	48	162	63	241	9:00 pm	33	108	20	70	53	178
9:15 am	18	84	40	151	58	235	9:15 pm	22	100	18	67	40	167
9:30 am	17	85	38	142	55	227	9:30 pm	29	103	21	53	50	156
9:45 am	29	81	36	134	65	215	9:45 pm	24	90	11	38	35	128
10:00 am	20	74	37	123	57	197	10:00 pm	25	82	17	41	42	123
10:15 am	19	80	31	114	50	194	10:15 pm	25	66	4	37	29	103
10:30 am	13	81	30	114	43	195	10:30 pm	16	55	6	42	22	97
10:45 am	22	91	25	105	47	196	10:45 pm	16	53	14	42	30	95
11:00 am	26	97	28	117	54	214	11:00 pm	9	42	13	30	22	72
11:15 am	20	98	31	133	51	231	11:15 pm	14		9		23	
11:30 am	23	102	21	138	44	240	11:30 pm	14		6		20	
11:45 am	28	99	37	145	65	244	11:45 pm	5		2		7	

24 Hour Direction	Volume	AM Peak Hour Time	Volume	PM Peak Hour Time	Volume
Total	3914	8:15 am	262	5:15 pm	277
E/B	1907	11:30 am	102	7:15 pm	169
W/B	2007	8:15 am	189	12:00 pm	145

Run Date: *08/25/2010*

Run Time: *9:09 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1A9-1B2
Page: 1

Count Date: 08/12/2010 12:00 am Thursday   Condition: :   Location: FIJI WAY W/O ADMIRALTY WAY

Align Coord:

	E/B		W/B		Total			E/B		W/B		Total	
Time	15'	Hour	15'	Hour	15'	Hour	Time	15'	Hour	15'	Hour	15'	Hour
12:00 am	17	36	1	17	18	53	12:00 pm	62	246	78	279	140	525
12:15 am	10	20	6	17	16	37	12:15 pm	60	258	70	280	130	538
12:30 am	8	12	6	14	14	26	12:30 pm	58	262	46	282	104	544
12:45 am	1	8	4	12	5	20	12:45 pm	66	280	85	297	151	577
1:00 am	1	11	1	10	2	21	1:00 pm	74	294	79	281	153	575
1:15 am	2	10	3	12	5	22	1:15 pm	64	278	72	272	136	550
1:30 am	4	9	4	10	8	19	1:30 pm	76	280	61	266	137	546
1:45 am	4	7	2	6	6	13	1:45 pm	80	264	69	267	149	531
2:00 am	0	4	3	7	3	11	2:00 pm	58	237	70	252	128	489
2:15 am	1	4	1	8	2	12	2:15 pm	66	245	66	245	132	490
2:30 am	2	4	0	10	2	14	2:30 pm	60	235	62	229	122	464
2:45 am	1	3	3	11	4	14	2:45 pm	53	229	54	224	107	453
3:00 am	0	4	4	10	4	14	3:00 pm	66	245	63	230	129	475
3:15 am	1	5	3	9	4	14	3:15 pm	56	269	50	235	106	504
3:30 am	1	6	1	11	2	17	3:30 pm	54	287	57	257	111	544
3:45 am	2	9	2	13	4	22	3:45 pm	69	295	60	265	129	560
4:00 am	1	11	3	15	4	26	4:00 pm	90	288	68	268	158	556
4:15 am	2	13	5	33	7	46	4:15 pm	74	254	72	266	146	520
4:30 am	4	15	3	46	7	61	4:30 pm	62	230	65	256	127	486
4:45 am	4	14	4	66	8	80	4:45 pm	62	222	63	268	125	490
5:00 am	3	23	21	89	24	112	5:00 pm	56	224	66	283	122	507
5:15 am	4	31	18	90	22	121	5:15 pm	50	255	62	281	112	536
5:30 am	3	44	23	97	26	141	5:30 pm	54	276	77	287	131	563
5:45 am	13	51	27	108	40	159	5:45 pm	64	298	78	262	142	560
6:00 am	11	56	22	138	33	194	6:00 pm	87	319	64	250	151	569
6:15 am	17	72	25	152	42	224	6:15 pm	71	290	68	240	139	530
6:30 am	10	79	34	186	44	265	6:30 pm	76	296	52	226	128	522
6:45 am	18	97	57	192	75	289	6:45 pm	85	266	66	228	151	494
7:00 am	27	112	36	186	63	298	7:00 pm	58	231	54	202	112	433
7:15 am	24	115	59	187	83	302	7:15 pm	77	210	54	184	131	394
7:30 am	28	119	40	172	68	291	7:30 pm	46	176	54	170	100	346
7:45 am	33	136	51	188	84	324	7:45 pm	50	158	40	157	90	315
8:00 am	30	141	37	187	67	328	8:00 pm	37	144	36	147	73	291
8:15 am	28	151	44	207	72	358	8:15 pm	43	137	40	136	83	273
8:30 am	45	185	56	211	101	396	8:30 pm	28	128	41	114	69	242
8:45 am	38	181	50	196	88	377	8:45 pm	36	124	30	95	66	219
9:00 am	40	181	57	195	97	376	9:00 pm	30	106	25	80	55	186
9:15 am	62	175	48	183	110	358	9:15 pm	34	109	18	77	52	186
9:30 am	41	152	41	186	82	338	9:30 pm	24	112	22	85	46	197
9:45 am	38	147	49	193	87	340	9:45 pm	18	111	15	72	33	183
10:00 am	34	155	45	189	79	344	10:00 pm	33	106	22	70	55	176
10:15 am	39	165	51	198	90	363	10:15 pm	37	91	26	58	63	149
10:30 am	36	161	48	204	84	365	10:30 pm	23	66	9	40	32	106
10:45 am	46	176	45	221	91	397	10:45 pm	13	57	13	37	26	94
11:00 am	44	180	54	256	98	436	11:00 pm	18	62	10	31	28	93
11:15 am	35	198	57	280	92	478	11:15 pm	12		8		20	
11:30 am	51	223	65	293	116	516	11:30 pm	14		6		20	
11:45 am	50	230	80	274	130	504	11:45 pm	18		7		25	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	7088	11:30 am	516	12:45 pm	577
E/B	3416	11:45 am	230	6:00 pm	319
W/B	3672	11:30 am	293	12:45 pm	297

Run Date: *08/25/2010*

Run Time: *9:09 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1G3-1G6
Page: 1

Count Date: 08/19/2010 12:00 am Thursday **Condition:** : **Location:** MINDANAO WAY W/O ADMIRALTY WAY

Align Coord:

Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour	Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour
12:00 am	2	12	6	12	8	24	12:00 pm	26	86	20	89	46	175
12:15 am	1	11	0	6	1	17	12:15 pm	22	80	20	108	42	188
12:30 am	4	15	4	7	8	22	12:30 pm	16	80	21	115	37	195
12:45 am	5	11	2	4	7	15	12:45 pm	22	86	28	124	50	210
1:00 am	1	6	0	3	1	9	1:00 pm	20	86	39	130	59	216
1:15 am	5	6	1	4	6	10	1:15 pm	22	90	27	137	49	227
1:30 am	0	2	1	5	1	7	1:30 pm	22	94	30	134	52	228
1:45 am	0	4	1	7	1	11	1:45 pm	22	98	34	134	56	232
2:00 am	1	5	1	7	2	12	2:00 pm	24	99	46	126	70	225
2:15 am	1	4	2	6	3	10	2:15 pm	26	99	24	104	50	203
2:30 am	2	3	3	6	5	9	2:30 pm	26	99	30	104	56	203
2:45 am	1	2	1	4	2	6	2:45 pm	23	104	26	116	49	220
3:00 am	0	3	0	3	0	6	3:00 pm	24	115	24	125	48	240
3:15 am	0	3	2	3	2	6	3:15 pm	26	111	24	129	50	240
3:30 am	1	3	1	1	2	4	3:30 pm	31	105	42	130	73	235
3:45 am	2	3	0	0	2	3	3:45 pm	34	100	35	121	69	221
4:00 am	0	3	0	2	0	5	4:00 pm	20	83	28	114	48	197
4:15 am	0	6	0	2	0	8	4:15 pm	20	102	25	127	45	229
4:30 am	1	8	0	5	1	13	4:30 pm	26	114	33	153	59	267
4:45 am	2	11	2	6	4	17	4:45 pm	17	120	28	155	45	275
5:00 am	3	10	0	6	3	16	5:00 pm	39	125	41	160	80	285
5:15 am	2	9	3	8	5	17	5:15 pm	32	126	51	177	83	303
5:30 am	4	10	1	11	5	21	5:30 pm	32	120	35	181	67	301
5:45 am	1	14	2	29	3	43	5:45 pm	22	116	33	202	55	318
6:00 am	2	16	2	32	4	48	6:00 pm	40	120	58	227	98	347
6:15 am	3	20	6	34	9	54	6:15 pm	26	106	55	216	81	322
6:30 am	8	23	19	39	27	62	6:30 pm	28	100	56	191	84	291
6:45 am	3	24	5	26	8	50	6:45 pm	26	87	58	165	84	252
7:00 am	6	41	4	34	10	75	7:00 pm	26	91	47	124	73	215
7:15 am	6	53	11	38	17	91	7:15 pm	20	91	30	91	50	182
7:30 am	9	61	6	40	15	101	7:30 pm	15	125	30	80	45	205
7:45 am	20	70	13	43	33	113	7:45 pm	30	141	17	66	47	207
8:00 am	18	66	8	46	26	112	8:00 pm	26	137	14	65	40	202
8:15 am	14	58	13	50	27	108	8:15 pm	54	141	19	63	73	204
8:30 am	18	58	9	60	27	118	8:30 pm	31	153	16	51	47	204
8:45 am	16	64	16	75	32	139	8:45 pm	26	258	16	47	42	305
9:00 am	10	72	12	89	22	161	9:00 pm	30	310	12	36	42	346
9:15 am	14	80	23	93	37	173	9:15 pm	66	308	7	35	73	343
9:30 am	24	80	24	94	48	174	9:30 pm	136	256	12	32	148	288
9:45 am	24	67	30	84	54	151	9:45 pm	78	128	5	24	83	152
10:00 am	18	69	16	74	34	143	10:00 pm	28	55	11	23	39	78
10:15 am	14	67	24	80	38	147	10:15 pm	14	32	4	17	18	49
10:30 am	11	77	14	81	25	158	10:30 pm	8	21	4	14	12	35
10:45 am	26	94	20	91	46	185	10:45 pm	5	14	4	14	9	28
11:00 am	16	93	22	95	38	188	11:00 pm	5	12	5	12	10	24
11:15 am	24	103	25	93	49	196	11:15 pm	3		1		4	
11:30 am	28	101	24	88	52	189	11:30 pm	1		4		5	
11:45 am	25	89	24	85	49	174	11:45 pm	3		2		5	

24 Hour Direction	24 Hour Volume	AM Peak Hour Time	AM Peak Hour Volume	PM Peak Hour Time	PM Peak Hour Volume
Total	3349	11:15 am	196	6:00 pm	347
E/B	1715	11:15 am	103	9:00 pm	310
W/B	1634	11:00 am	95	6:00 pm	227

Run Date: *08/25/2010*

Run Time: *9:10 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1H1-1H4

Page: 1

Count Date: 08/19/2010 12:00 am Thursday Condition: : Location: PALAWAN WAY S/O ADMIRALTY WAY

Align Coord:

	N/B		S/B		Total	
Time	15'	Hour	15'	Hour	15'	Hour
12:00 am	11	26	6	17	17	43
12:15 am	2	23	4	12	6	35
12:30 am	8	27	2	13	10	40
12:45 am	5	20	5	13	10	33
1:00 am	8	17	1	10	9	27
1:15 am	6	15	5	12	11	27
1:30 am	1	10	2	9	3	19
1:45 am	2	12	2	14	4	26
2:00 am	6	10	3	12	9	22
2:15 am	1	6	2	9	3	15
2:30 am	3	6	7	9	10	15
2:45 am	0	5	0	5	0	10
3:00 am	2	6	0	6	2	12
3:15 am	1	5	2	7	3	12
3:30 am	2	5	3	6	5	11
3:45 am	1	5	1	7	2	12
4:00 am	1	9	1	19	2	28
4:15 am	1	13	1	19	2	32
4:30 am	2	17	4	19	6	36
4:45 am	5	21	13	21	18	42
5:00 am	5	20	1	16	6	36
5:15 am	5	32	1	22	6	54
5:30 am	6	43	6	39	12	82
5:45 am	4	42	8	49	12	91
6:00 am	17	54	7	60	24	114
6:15 am	16	63	18	70	34	133
6:30 am	5	65	16	60	21	125
6:45 am	16	83	19	64	35	147
7:00 am	26	97	17	62	43	159
7:15 am	18	107	8	63	26	170
7:30 am	23	115	20	65	43	180
7:45 am	30	134	17	54	47	188
8:00 am	36	130	18	55	54	185
8:15 am	26	132	10	79	36	211
8:30 am	42	140	9	102	51	242
8:45 am	26	126	18	124	44	250
9:00 am	38	121	42	123	80	244
9:15 am	34	113	33	105	67	218
9:30 am	28	107	31	96	59	203
9:45 am	21	111	17	85	38	196
10:00 am	30	112	24	83	54	195
10:15 am	28	106	24	80	52	186
10:30 am	32	102	20	75	52	177
10:45 am	22	106	15	87	37	193
11:00 am	24	120	21	92	45	212
11:15 am	24	133	19	94	43	227
11:30 am	36	129	32	104	68	233
11:45 am	36	115	20	99	56	214

	N/B		S/B		Total	
Time	15'	Hour	15'	Hour	15'	Hour
12:00 pm	37	112	23	98	60	210
12:15 pm	20	93	29	101	49	194
12:30 pm	22	107	27	99	49	206
12:45 pm	33	105	19	95	52	200
1:00 pm	18	98	26	97	44	195
1:15 pm	34	108	27	98	61	206
1:30 pm	20	104	23	103	43	207
1:45 pm	26	106	21	106	47	212
2:00 pm	28	112	27	115	55	227
2:15 pm	30	114	32	117	62	231
2:30 pm	22	110	26	111	48	221
2:45 pm	32	120	30	116	62	236
3:00 pm	30	112	29	117	59	229
3:15 pm	26	116	26	113	52	229
3:30 pm	32	114	31	121	63	235
3:45 pm	24	104	31	114	55	218
4:00 pm	34	119	25	117	59	236
4:15 pm	24	121	34	125	58	246
4:30 pm	22	135	24	127	46	262
4:45 pm	39	139	34	139	73	278
5:00 pm	36	122	33	148	69	270
5:15 pm	38	112	36	147	74	259
5:30 pm	26	104	36	149	62	253
5:45 pm	22	102	43	164	65	266
6:00 pm	26	104	32	148	58	252
6:15 pm	30	99	38	138	68	237
6:30 pm	24	86	51	130	75	216
6:45 pm	24	80	27	114	51	194
7:00 pm	21	74	22	126	43	200
7:15 pm	17	71	30	121	47	192
7:30 pm	18	72	35	117	53	189
7:45 pm	18	71	39	102	57	173
8:00 pm	18	75	17	85	35	160
8:15 pm	18	74	26	87	44	161
8:30 pm	17	78	20	82	37	160
8:45 pm	22	77	22	84	44	161
9:00 pm	17	68	19	87	36	155
9:15 pm	22	54	21	86	43	140
9:30 pm	16	40	22	73	38	113
9:45 pm	13	35	25	72	38	107
10:00 pm	3	36	18	63	21	99
10:15 pm	8	51	8	59	16	110
10:30 pm	11	69	21	63	32	132
10:45 pm	14	71	16	48	30	119
11:00 pm	18	67	14	36	32	103
11:15 pm	26		12		38	
11:30 pm	13		6		19	
11:45 pm	10		4		14	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	3613	8:45 am	250	4:45 pm	278
N/B	1821	8:30 am	140	4:45 pm	139
S/B	1792	8:45 am	124	5:45 pm	164

Run Date: *08/25/2010*

Run Time: *9:10 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1G7-1H0
Page: 1

Count Date: 08/19/2010 12:00 am Thursday Condition: : Location: PALAWAN WAY N/O ADMIRALTY WAY

Align Coord:

Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour	Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour
12:00 am	6	22	6	14	12	36	12:00 pm	34	142	41	200	75	342
12:15 am	4	19	6	12	10	31	12:15 pm	32	142	53	205	85	347
12:30 am	6	19	0	7	6	26	12:30 pm	38	141	40	196	78	337
12:45 am	6	13	2	8	8	21	12:45 pm	38	130	66	200	104	330
1:00 am	3	9	4	10	7	19	1:00 pm	34	120	46	166	80	286
1:15 am	4	11	1	6	5	17	1:15 pm	31	123	44	156	75	279
1:30 am	0	9	1	5	1	14	1:30 pm	27	127	44	156	71	283
1:45 am	2	10	4	9	6	19	1:45 pm	28	122	32	166	60	288
2:00 am	5	10	0	6	5	16	2:00 pm	37	118	36	178	73	296
2:15 am	2	6	0	6	2	12	2:15 pm	35	117	44	210	79	327
2:30 am	1	8	5	6	6	14	2:30 pm	22	120	54	228	76	348
2:45 am	2	7	1	3	3	10	2:45 pm	24	120	44	237	68	357
3:00 am	1	7	0	3	1	10	3:00 pm	36	123	68	277	104	400
3:15 am	4	6	0	4	4	10	3:15 pm	38	120	62	269	100	389
3:30 am	0	2	2	5	2	7	3:30 pm	22	116	63	285	85	401
3:45 am	2	5	1	5	3	10	3:45 pm	27	127	84	287	111	414
4:00 am	0	4	1	6	1	10	4:00 pm	33	128	60	263	93	391
4:15 am	0	6	1	6	1	12	4:15 pm	34	119	78	269	112	388
4:30 am	3	12	2	7	5	19	4:30 pm	33	115	65	268	98	383
4:45 am	1	17	2	9	3	26	4:45 pm	28	113	60	267	88	380
5:00 am	2	16	1	13	3	29	5:00 pm	24	122	66	300	90	422
5:15 am	6	22	2	18	8	40	5:15 pm	30	133	77	342	107	475
5:30 am	8	30	4	26	12	56	5:30 pm	31	129	64	355	95	484
5:45 am	0	34	6	39	6	73	5:45 pm	37	137	93	369	130	506
6:00 am	8	48	6	49	14	97	6:00 pm	35	126	108	338	143	464
6:15 am	14	74	10	64	24	138	6:15 pm	26	128	90	294	116	422
6:30 am	12	80	17	76	29	156	6:30 pm	39	132	78	269	117	401
6:45 am	14	96	16	87	30	183	6:45 pm	26	124	62	239	88	363
7:00 am	34	123	21	94	55	217	7:00 pm	37	123	64	225	101	348
7:15 am	20	127	22	97	42	224	7:15 pm	30	120	65	203	95	323
7:30 am	28	145	28	100	56	245	7:30 pm	31	114	48	170	79	284
7:45 am	41	167	23	108	64	275	7:45 pm	25	113	48	145	73	258
8:00 am	38	172	24	117	62	289	8:00 pm	34	111	42	123	76	234
8:15 am	38	166	25	134	63	300	8:15 pm	24	93	32	111	56	204
8:30 am	50	175	36	152	86	327	8:30 pm	30	89	23	97	53	186
8:45 am	46	167	32	162	78	329	8:45 pm	23	81	26	100	49	181
9:00 am	32	166	41	164	73	330	9:00 pm	16	78	30	89	46	167
9:15 am	47	169	43	161	90	330	9:15 pm	20	78	18	71	38	149
9:30 am	42	152	46	153	88	305	9:30 pm	22	70	26	71	48	141
9:45 am	45	138	34	135	79	273	9:45 pm	20	57	15	54	35	111
10:00 am	35	126	38	135	73	261	10:00 pm	16	47	12	51	28	98
10:15 am	30	127	35	131	65	258	10:15 pm	12	47	18	54	30	101
10:30 am	28	124	28	117	56	241	10:30 pm	9	57	9	49	18	106
10:45 am	33	137	34	123	67	260	10:45 pm	10	60	12	43	22	103
11:00 am	36	147	34	129	70	276	11:00 pm	16	57	15	43	31	100
11:15 am	27	145	21	136	48	281	11:15 pm	22		13		35	
11:30 am	41	150	34	168	75	318	11:30 pm	12		3		15	
11:45 am	43	147	40	174	83	321	11:45 pm	7		12		19	

24 Hour Direction	24 Hour Volume	AM Peak Hour Time	AM Peak Hour Volume	PM Peak Hour Time	PM Peak Hour Volume
Total	5138	9:00 am	330	5:45 pm	506
N/B	2145	8:30 am	175	12:00 pm	142
S/B	2993	11:45 am	174	5:45 pm	369

Run Date: *08/25/2010*
Run Time: *9:15 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1H5-1H8
Page: 1

Count Date: 08/19/2010 12:00 am Thursday Condition: : Location: PANAY WAY E/O VIA MARINA
Align Coord:

	E/B		W/B		Total			E/B		W/B		Total	
Time	15'	Hour	15'	Hour	15'	Hour	Time	15'	Hour	15'	Hour	15'	Hour
12:00 am	5	13	7	24	12	37	12:00 pm	48	172	46	156	94	328
12:15 am	3	14	5	21	8	35	12:15 pm	36	162	38	148	74	310
12:30 am	4	15	6	20	10	35	12:30 pm	38	162	42	151	80	313
12:45 am	1	15	6	17	7	32	12:45 pm	50	161	30	147	80	308
1:00 am	6	18	4	17	10	35	1:00 pm	38	139	38	159	76	298
1:15 am	4	13	4	14	8	27	1:15 pm	36	127	41	155	77	282
1:30 am	4	12	3	14	7	26	1:30 pm	37	123	38	146	75	269
1:45 am	4	9	6	12	10	21	1:45 pm	28	118	42	157	70	275
2:00 am	1	6	1	9	2	15	2:00 pm	26	125	34	148	60	273
2:15 am	3	6	4	10	7	16	2:15 pm	32	125	32	148	64	273
2:30 am	1	5	1	7	2	12	2:30 pm	32	119	49	173	81	292
2:45 am	1	4	3	10	4	14	2:45 pm	35	131	33	169	68	300
3:00 am	1	6	2	11	3	17	3:00 pm	26	138	34	184	60	322
3:15 am	2	5	1	10	3	15	3:15 pm	26	146	57	200	83	346
3:30 am	0	3	4	9	4	12	3:30 pm	44	157	45	183	89	340
3:45 am	3	5	4	10	7	15	3:45 pm	42	161	48	193	90	354
4:00 am	0	3	1	10	1	13	4:00 pm	34	159	50	203	84	362
4:15 am	0	8	0	14	0	22	4:15 pm	37	163	40	206	77	369
4:30 am	2	12	5	19	7	31	4:30 pm	48	166	55	236	103	402
4:45 am	1	14	4	19	5	33	4:45 pm	40	168	58	250	98	418
5:00 am	5	25	5	22	10	47	5:00 pm	38	168	53	240	91	408
5:15 am	4	29	5	28	9	57	5:15 pm	40	169	70	246	110	415
5:30 am	4	36	5	35	9	71	5:30 pm	50	168	69	242	119	410
5:45 am	12	45	7	48	19	93	5:45 pm	40	164	48	230	88	394
6:00 am	9	50	11	57	20	107	6:00 pm	39	164	59	218	98	382
6:15 am	11	77	12	76	23	153	6:15 pm	39	159	66	203	105	362
6:30 am	13	87	18	79	31	166	6:30 pm	46	156	57	189	103	345
6:45 am	17	105	16	87	33	192	6:45 pm	40	138	36	167	76	305
7:00 am	36	121	30	97	66	218	7:00 pm	34	132	44	161	78	293
7:15 am	21	129	15	97	36	226	7:15 pm	36	132	52	158	88	290
7:30 am	31	158	26	115	57	273	7:30 pm	28	127	35	151	63	278
7:45 am	33	181	26	123	59	304	7:45 pm	34	128	30	147	64	275
8:00 am	44	197	30	135	74	332	8:00 pm	34	120	41	152	75	272
8:15 am	50	204	33	134	83	338	8:15 pm	31	105	45	141	76	246
8:30 am	54	204	34	139	88	343	8:30 pm	29	89	31	121	60	210
8:45 am	49	211	38	153	87	364	8:45 pm	26	82	35	119	61	201
9:00 am	51	210	29	154	80	364	9:00 pm	19	84	30	110	49	194
9:15 am	50	195	38	155	88	350	9:15 pm	15	87	25	103	40	190
9:30 am	61	176	48	143	109	319	9:30 pm	22	94	29	104	51	198
9:45 am	48	165	39	142	87	307	9:45 pm	28	84	26	93	54	177
10:00 am	36	150	30	127	66	277	10:00 pm	22	70	23	92	45	162
10:15 am	31	154	26	135	57	289	10:15 pm	22	61	26	85	48	146
10:30 am	50	171	47	149	97	320	10:30 pm	12	48	18	69	30	117
10:45 am	33	167	24	148	57	315	10:45 pm	14	43	25	62	39	105
11:00 am	40	178	38	166	78	344	11:00 pm	13	33	16	53	29	86
11:15 am	48	186	40	174	88	360	11:15 pm	9		10		19	
11:30 am	46	174	46	172	92	346	11:30 pm	7		11		18	
11:45 am	44	166	42	168	86	334	11:45 pm	4		16		20	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	5186	8:45 am	364	4:45 pm	418
E/B	2481	8:45 am	211	12:00 pm	172
W/B	2705	11:15 am	174	4:45 pm	250

Run Date: *08/25/2010*

Run Time: *9:11 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1I3-1I6
Page: 1

Count Date: 08/19/2010 12:00 am Thursday Condition: : Location: VIA MARINA N/O ADMIRALTY WAY

Align Coord:

Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour	Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour
12:00 am	24	61	47	160	71	221	12:00 pm	160	602	138	589	298	1191
12:15 am	14	49	46	133	60	182	12:15 pm	158	602	142	593	300	1195
12:30 am	13	51	40	114	53	165	12:30 pm	148	584	140	592	288	1176
12:45 am	10	46	27	91	37	137	12:45 pm	136	558	169	583	305	1141
1:00 am	12	46	20	87	32	133	1:00 pm	160	526	142	568	302	1094
1:15 am	16	44	27	90	43	134	1:15 pm	140	498	141	596	281	1094
1:30 am	8	32	17	79	25	111	1:30 pm	122	506	131	619	253	1125
1:45 am	10	29	23	71	33	100	1:45 pm	104	508	154	645	258	1153
2:00 am	10	25	23	53	33	78	2:00 pm	132	520	170	649	302	1169
2:15 am	4	23	16	43	20	66	2:15 pm	148	500	164	656	312	1156
2:30 am	5	22	9	31	14	53	2:30 pm	124	484	157	680	281	1164
2:45 am	6	18	5	36	11	54	2:45 pm	116	496	158	697	274	1193
3:00 am	8	15	13	37	21	52	3:00 pm	112	516	177	737	289	1253
3:15 am	3	18	4	32	7	50	3:15 pm	132	536	188	765	320	1301
3:30 am	1	25	14	38	15	63	3:30 pm	136	561	174	749	310	1310
3:45 am	3	32	6	37	9	69	3:45 pm	136	565	198	778	334	1343
4:00 am	11	39	8	50	19	89	4:00 pm	132	569	205	812	337	1381
4:15 am	10	40	10	57	20	97	4:15 pm	157	594	172	813	329	1407
4:30 am	8	38	13	62	21	100	4:30 pm	140	596	203	866	343	1462
4:45 am	10	42	19	67	29	109	4:45 pm	140	612	232	903	372	1515
5:00 am	12	58	15	78	27	136	5:00 pm	157	603	206	873	363	1476
5:15 am	8	72	15	91	23	163	5:15 pm	159	600	225	903	384	1503
5:30 am	12	114	18	120	30	234	5:30 pm	156	601	240	892	396	1493
5:45 am	26	149	30	160	56	309	5:45 pm	131	614	202	888	333	1502
6:00 am	26	193	28	192	54	385	6:00 pm	154	630	236	900	390	1530
6:15 am	50	237	44	240	94	477	6:15 pm	160	630	214	876	374	1506
6:30 am	47	303	58	286	105	589	6:30 pm	169	588	236	867	405	1455
6:45 am	70	392	62	336	132	728	6:45 pm	147	535	214	835	361	1370
7:00 am	70	476	76	406	146	882	7:00 pm	154	486	212	826	366	1312
7:15 am	116	583	90	454	206	1037	7:15 pm	118	432	205	794	323	1226
7:30 am	136	629	108	493	244	1122	7:30 pm	116	422	204	763	320	1185
7:45 am	154	692	132	509	286	1201	7:45 pm	98	377	205	705	303	1082
8:00 am	177	724	124	534	301	1258	8:00 pm	100	363	180	658	280	1021
8:15 am	162	723	129	551	291	1274	8:15 pm	108	339	174	628	282	967
8:30 am	199	739	124	580	323	1319	8:30 pm	71	313	146	586	217	899
8:45 am	186	718	157	584	343	1302	8:45 pm	84	336	158	576	242	912
9:00 am	176	671	141	567	317	1238	9:00 pm	76	325	150	528	226	853
9:15 am	178	661	158	548	336	1209	9:15 pm	82	301	132	504	214	805
9:30 am	178	664	128	508	306	1172	9:30 pm	94	277	136	491	230	768
9:45 am	139	630	140	499	279	1129	9:45 pm	73	246	110	455	183	701
10:00 am	166	642	122	478	288	1120	10:00 pm	52	219	126	428	178	647
10:15 am	181	610	118	499	299	1109	10:15 pm	58	220	119	404	177	624
10:30 am	144	562	119	501	263	1063	10:30 pm	63	210	100	365	163	575
10:45 am	151	556	119	528	270	1084	10:45 pm	46	177	83	325	129	502
11:00 am	134	553	143	534	277	1087	11:00 pm	53	161	102	294	155	455
11:15 am	133	579	120	529	253	1108	11:15 pm	48		80		128	
11:30 am	138	604	146	551	284	1155	11:30 pm	30		60		90	
11:45 am	148	614	125	545	273	1159	11:45 pm	30		52		82	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	20061	8:30 am	1319	6:00 pm	1530
N/B	9023	8:30 am	739	6:00 pm	630
S/B	11038	8:45 am	584	4:45 pm	903

Run Date: *08/25/2010*

Run Time: *9:13 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1H9-1I2
Page: 1

Count Date: 08/19/2010 12:00 am Thursday   Condition: :   Location: TAHITI WAY E/O VIA MARINA

Align Coord:

Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour	Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour
12:00 am	10	28	7	10	17	38	12:00 pm	21	95	26	107	47	202
12:15 am	5	20	0	3	5	23	12:15 pm	23	107	22	107	45	214
12:30 am	11	17	1	5	12	22	12:30 pm	20	113	28	113	48	226
12:45 am	2	8	2	6	4	14	12:45 pm	31	117	31	117	62	234
1:00 am	2	11	0	4	2	15	1:00 pm	33	109	26	106	59	215
1:15 am	2	15	2	5	4	20	1:15 pm	29	104	28	95	57	199
1:30 am	2	18	2	10	4	28	1:30 pm	24	98	32	99	56	197
1:45 am	5	20	0	9	5	29	1:45 pm	23	96	20	87	43	183
2:00 am	6	17	1	10	7	27	2:00 pm	28	93	15	91	43	184
2:15 am	5	12	7	10	12	22	2:15 pm	23	91	32	92	55	183
2:30 am	4	10	1	4	5	14	2:30 pm	22	100	20	79	42	179
2:45 am	2	7	1	3	3	10	2:45 pm	20	112	24	85	44	197
3:00 am	1	6	1	3	2	9	3:00 pm	26	117	16	82	42	199
3:15 am	3	5	1	4	4	9	3:15 pm	32	119	19	91	51	210
3:30 am	1	3	0	6	1	9	3:30 pm	34	116	26	90	60	206
3:45 am	1	3	1	7	2	10	3:45 pm	25	113	21	92	46	205
4:00 am	0	3	2	7	2	10	4:00 pm	28	105	25	89	53	194
4:15 am	1	6	3	8	4	14	4:15 pm	29	94	18	86	47	180
4:30 am	1	11	1	11	2	22	4:30 pm	31	98	28	88	59	186
4:45 am	1	10	1	19	2	29	4:45 pm	17	92	18	83	35	175
5:00 am	3	16	3	22	6	38	5:00 pm	17	126	22	87	39	213
5:15 am	6	17	6	28	12	45	5:15 pm	33	150	20	96	53	246
5:30 am	0	17	9	38	9	55	5:30 pm	25	155	23	107	48	262
5:45 am	7	21	4	48	11	69	5:45 pm	51	156	22	107	73	263
6:00 am	4	22	9	63	13	85	6:00 pm	41	148	31	103	72	251
6:15 am	6	30	16	80	22	110	6:15 pm	38	149	31	97	69	246
6:30 am	4	34	19	80	23	114	6:30 pm	26	141	23	83	49	224
6:45 am	8	46	19	88	27	134	6:45 pm	43	149	18	90	61	239
7:00 am	12	48	26	94	38	142	7:00 pm	42	142	25	90	67	232
7:15 am	10	58	16	98	26	156	7:15 pm	30	139	17	85	47	224
7:30 am	16	64	27	130	43	194	7:30 pm	34	148	30	82	64	230
7:45 am	10	65	25	143	35	208	7:45 pm	36	145	18	69	54	214
8:00 am	22	67	30	164	52	231	8:00 pm	39	143	20	67	59	210
8:15 am	16	59	48	177	64	236	8:15 pm	39	124	14	59	53	183
8:30 am	17	59	40	153	57	212	8:30 pm	31	109	17	58	48	167
8:45 am	12	60	46	149	58	209	8:45 pm	34	104	16	64	50	168
9:00 am	14	64	43	137	57	201	9:00 pm	20	90	12	61	32	151
9:15 am	16	68	24	118	40	186	9:15 pm	24	97	13	57	37	154
9:30 am	18	77	36	114	54	191	9:30 pm	26	98	23	52	49	150
9:45 am	16	79	34	104	50	183	9:45 pm	20	85	13	34	33	119
10:00 am	18	79	24	100	42	179	10:00 pm	27	80	8	25	35	105
10:15 am	25	87	20	97	45	184	10:15 pm	25	75	8	25	33	100
10:30 am	20	88	26	97	46	185	10:30 pm	13	63	5	24	18	87
10:45 am	16	90	30	88	46	178	10:45 pm	15	62	4	30	19	92
11:00 am	26	91	21	83	47	174	11:00 pm	22	56	8	29	30	85
11:15 am	26	86	20	88	46	174	11:15 pm	13		7		20	
11:30 am	22	83	17	90	39	173	11:30 pm	12		11		23	
11:45 am	17	81	25	101	42	182	11:45 pm	9		3		12	

24 Hour Direction	Volume	AM Peak Hour Time	Volume	PM Peak Hour Time	Volume
Total	3390	8:15 am	236	5:45 pm	263
E/B	1756	11:00 am	91	5:45 pm	156
W/B	1634	8:15 am	177	12:45 pm	117

Run Date: 08/25/2010
Run Time: 9:13 AM

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1I71J0
Page: 1

Count Date: 08/19/2010 12:00 am Thursday   Condition: :   Location: VIA MARINA N/O TAHITI WAY
Align Coord:

	N/B		S/B		Total			N/B		S/B		Total	
Time	15'	Hour	15'	Hour	15'	Hour	Time	15'	Hour	15'	Hour	15'	Hour
12:00 am	17	50	34	107	51	157	12:00 pm	105	441	94	389	199	830
12:15 am	12	35	30	93	42	128	12:15 pm	104	440	105	401	209	841
12:30 am	12	31	30	76	42	107	12:30 pm	124	449	98	401	222	850
12:45 am	9	24	13	66	22	90	12:45 pm	108	416	92	406	200	822
1:00 am	2	30	20	66	22	96	1:00 pm	104	398	106	406	210	804
1:15 am	8	40	13	68	21	108	1:15 pm	113	400	105	411	218	811
1:30 am	5	43	20	65	25	108	1:30 pm	91	389	103	408	194	797
1:45 am	15	44	13	57	28	101	1:45 pm	90	392	92	408	182	800
2:00 am	12	34	22	53	34	87	2:00 pm	106	406	111	427	217	833
2:15 am	11	25	10	35	21	60	2:15 pm	102	398	102	416	204	814
2:30 am	6	15	12	35	18	50	2:30 pm	94	394	103	426	197	820
2:45 am	5	14	9	30	14	44	2:45 pm	104	400	111	437	215	837
3:00 am	3	12	4	29	7	41	3:00 pm	98	392	100	442	198	834
3:15 am	1	16	10	28	11	44	3:15 pm	98	396	112	462	210	858
3:30 am	5	25	7	23	12	48	3:30 pm	100	408	114	459	214	867
3:45 am	3	29	8	21	11	50	3:45 pm	96	411	116	486	212	897
4:00 am	7	34	3	19	10	53	4:00 pm	102	425	120	483	222	908
4:15 am	10	41	5	26	15	67	4:15 pm	110	433	109	493	219	926
4:30 am	9	45	5	29	14	74	4:30 pm	103	455	141	529	244	984
4:45 am	8	60	6	32	14	92	4:45 pm	110	470	113	526	223	996
5:00 am	14	84	10	39	24	123	5:00 pm	110	471	130	611	240	1082
5:15 am	14	108	8	42	22	150	5:15 pm	132	471	145	648	277	1119
5:30 am	24	147	8	51	32	198	5:30 pm	118	439	138	679	256	1118
5:45 am	32	193	13	64	45	257	5:45 pm	111	426	198	707	309	1133
6:00 am	38	236	13	80	51	316	6:00 pm	110	413	167	689	277	1102
6:15 am	53	278	17	108	70	386	6:15 pm	100	419	176	672	276	1091
6:30 am	70	339	21	131	91	470	6:30 pm	105	419	166	654	271	1073
6:45 am	75	385	29	159	104	544	6:45 pm	98	430	180	628	278	1058
7:00 am	80	438	41	180	121	618	7:00 pm	116	423	150	601	266	1024
7:15 am	114	510	40	209	154	719	7:15 pm	100	395	158	581	258	976
7:30 am	116	572	49	226	165	798	7:30 pm	116	372	140	559	256	931
7:45 am	128	628	50	247	178	875	7:45 pm	91	316	153	533	244	849
8:00 am	152	656	70	267	222	923	8:00 pm	88	291	130	507	218	798
8:15 am	176	662	57	259	233	921	8:15 pm	77	265	136	503	213	768
8:30 am	172	632	70	271	242	903	8:30 pm	60	246	114	471	174	717
8:45 am	156	611	70	271	226	882	8:45 pm	66	238	127	477	193	715
9:00 am	158	591	62	267	220	858	9:00 pm	62	227	126	460	188	687
9:15 am	146	551	69	287	215	838	9:15 pm	58	202	104	432	162	634
9:30 am	151	521	70	300	221	821	9:30 pm	52	187	120	422	172	609
9:45 am	136	484	66	312	202	796	9:45 pm	55	176	110	373	165	549
10:00 am	118	468	82	332	200	800	10:00 pm	37	159	98	329	135	488
10:15 am	116	444	82	332	198	776	10:15 pm	43	147	94	303	137	450
10:30 am	114	418	82	362	196	780	10:30 pm	41	129	71	269	112	398
10:45 am	120	408	86	370	206	778	10:45 pm	38	122	66	237	104	359
11:00 am	94	398	82	380	176	778	11:00 pm	25	101	72	213	97	314
11:15 am	90	409	112	392	202	801	11:15 pm	25		60		85	
11:30 am	104	423	90	385	194	808	11:30 pm	34		39		73	
11:45 am	110	443	96	393	206	836	11:45 pm	17		42		59	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	14554	8:00 am	923	5:45 pm	1133
N/B	7178	8:15 am	662	5:00 pm	471
S/B	7376	11:45 am	393	5:45 pm	707

Run Date: *08/25/2010*

Run Time: *9:15 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1J5-1J8
Page: 1

Count Date: 08/19/2010 12:00 am Thursday Condition: : Location: VIA MARINA S/O PANAY WAY
Align Coord:

Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour	Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour
12:00 am	26	73	48	131	74	204	12:00 pm	148	610	124	518	272	1128
12:15 am	17	52	36	108	53	160	12:15 pm	142	602	132	520	274	1122
12:30 am	22	48	34	91	56	139	12:30 pm	164	614	125	527	289	1141
12:45 am	8	31	13	76	21	107	12:45 pm	156	578	137	526	293	1104
1:00 am	5	41	25	83	30	124	1:00 pm	140	554	126	510	266	1064
1:15 am	13	49	19	84	32	133	1:15 pm	154	568	139	514	293	1082
1:30 am	5	46	19	81	24	127	1:30 pm	128	570	124	516	252	1086
1:45 am	18	50	20	71	38	121	1:45 pm	132	580	121	527	253	1107
2:00 am	13	37	26	62	39	99	2:00 pm	154	593	130	548	284	1141
2:15 am	10	26	16	42	26	68	2:15 pm	156	583	141	545	297	1128
2:30 am	9	18	9	37	18	55	2:30 pm	138	547	135	534	273	1081
2:45 am	5	15	11	37	16	52	2:45 pm	145	559	142	533	287	1092
3:00 am	2	16	6	35	8	51	3:00 pm	144	558	127	549	271	1107
3:15 am	2	24	11	33	13	57	3:15 pm	120	553	130	576	250	1129
3:30 am	6	34	9	29	15	63	3:30 pm	150	593	134	602	284	1195
3:45 am	6	39	9	25	15	64	3:45 pm	144	581	158	637	302	1218
4:00 am	10	53	4	26	14	79	4:00 pm	139	584	154	627	293	1211
4:15 am	12	65	7	33	19	98	4:15 pm	160	611	156	637	316	1248
4:30 am	11	75	5	37	16	112	4:30 pm	138	625	169	667	307	1292
4:45 am	20	94	10	43	30	137	4:45 pm	147	647	148	684	295	1331
5:00 am	22	115	11	48	33	163	5:00 pm	166	650	164	752	330	1402
5:15 am	22	154	11	54	33	208	5:15 pm	174	640	186	782	360	1422
5:30 am	30	210	11	68	41	278	5:30 pm	160	617	186	800	346	1417
5:45 am	41	266	15	85	56	351	5:45 pm	150	611	216	810	366	1421
6:00 am	61	341	17	107	78	448	6:00 pm	156	597	194	810	350	1407
6:15 am	78	398	25	143	103	541	6:15 pm	151	620	204	814	355	1434
6:30 am	86	470	28	184	114	654	6:30 pm	154	592	196	812	350	1404
6:45 am	116	563	37	220	153	783	6:45 pm	136	597	216	803	352	1400
7:00 am	118	633	53	263	171	896	7:00 pm	179	592	198	767	377	1359
7:15 am	150	716	66	311	216	1027	7:15 pm	123	531	202	749	325	1280
7:30 am	179	799	64	335	243	1134	7:30 pm	159	523	187	709	346	1232
7:45 am	186	849	80	367	266	1216	7:45 pm	131	458	180	672	311	1130
8:00 am	201	882	101	383	302	1265	8:00 pm	118	421	180	664	298	1085
8:15 am	233	891	90	370	323	1261	8:15 pm	115	381	162	648	277	1029
8:30 am	229	856	96	368	325	1224	8:30 pm	94	346	150	618	244	964
8:45 am	219	823	96	368	315	1191	8:45 pm	94	330	172	612	266	942
9:00 am	210	806	88	370	298	1176	9:00 pm	78	305	164	578	242	883
9:15 am	198	762	88	400	286	1162	9:15 pm	80	279	132	541	212	820
9:30 am	196	738	96	427	292	1165	9:30 pm	78	258	144	539	222	797
9:45 am	202	704	98	420	300	1124	9:45 pm	69	238	138	493	207	731
10:00 am	166	661	118	438	284	1099	10:00 pm	52	220	127	436	179	656
10:15 am	174	639	115	431	289	1070	10:15 pm	59	205	130	397	189	602
10:30 am	162	605	89	446	251	1051	10:30 pm	58	181	98	343	156	524
10:45 am	159	603	116	485	275	1088	10:45 pm	51	160	81	302	132	462
11:00 am	144	609	111	481	255	1090	11:00 pm	37	137	88	264	125	401
11:15 am	140	613	130	494	270	1107	11:15 pm	35		76		111	
11:30 am	160	615	128	496	288	1111	11:30 pm	37		57		94	
11:45 am	165	619	112	493	277	1112	11:45 pm	28		43		71	

24 Hour Direction	24 Hour Volume	AM Peak Hour Time	AM Peak Hour Volume	PM Peak Hour Time	PM Peak Hour Volume
Total	19538	8:00 am	1265	6:15 pm	1434
N/B	10088	8:15 am	891	5:00 pm	650
S/B	9450	11:30 am	496	6:15 pm	814

Run Date: *08/25/2010*

Run Time: *9:12 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1J1-1J4

Page: 1

Count Date: 08/19/2010 12:00 am Thursday   Condition: :   Location: VIA MARINA S/O ADMIRALTY WAY

Align Coord:

	N/B		S/B		Total			N/B		S/B		Total	
Time	15'	Hour	15'	Hour	15'	Hour	Time	15'	Hour	15'	Hour	15'	Hour
12:00 am	38	103	58	174	96	277	12:00 pm	210	840	182	732	392	1572
12:15 am	25	79	52	148	77	227	12:15 pm	200	849	194	732	394	1581
12:30 am	22	75	40	125	62	200	12:30 pm	216	869	185	751	401	1620
12:45 am	18	70	24	105	42	175	12:45 pm	214	861	171	758	385	1619
1:00 am	14	72	32	108	46	180	1:00 pm	219	843	182	774	401	1617
1:15 am	21	72	29	110	50	182	1:15 pm	220	828	213	765	433	1593
1:30 am	17	64	20	101	37	165	1:30 pm	208	821	192	742	400	1563
1:45 am	20	54	27	88	47	142	1:45 pm	196	816	187	732	383	1548
2:00 am	14	42	34	74	48	116	2:00 pm	204	850	173	729	377	1579
2:15 am	13	32	20	51	33	83	2:15 pm	213	850	190	742	403	1592
2:30 am	7	24	7	44	14	68	2:30 pm	203	835	182	766	385	1601
2:45 am	8	23	13	51	21	74	2:45 pm	230	846	184	766	414	1612
3:00 am	4	24	11	51	15	75	3:00 pm	204	824	186	796	390	1620
3:15 am	5	31	13	46	18	77	3:15 pm	198	824	214	828	412	1652
3:30 am	6	40	14	41	20	81	3:30 pm	214	853	182	830	396	1683
3:45 am	9	50	13	35	22	85	3:45 pm	208	841	214	888	422	1729
4:00 am	11	64	6	39	17	103	4:00 pm	204	858	218	907	422	1765
4:15 am	14	81	8	50	22	131	4:15 pm	227	879	216	943	443	1822
4:30 am	16	101	8	61	24	162	4:30 pm	202	891	240	1007	442	1898
4:45 am	23	128	17	71	40	199	4:45 pm	225	939	233	1051	458	1990
5:00 am	28	164	17	89	45	253	5:00 pm	225	930	254	1113	479	2043
5:15 am	34	220	19	104	53	324	5:15 pm	239	961	280	1175	519	2136
5:30 am	43	290	18	139	61	429	5:30 pm	250	930	284	1207	534	2137
5:45 am	59	359	35	169	94	528	5:45 pm	216	912	295	1219	511	2131
6:00 am	84	444	32	189	116	633	6:00 pm	256	888	316	1206	572	2094
6:15 am	104	531	54	235	158	766	6:15 pm	208	869	312	1179	520	2048
6:30 am	112	633	48	267	160	900	6:30 pm	232	845	296	1129	528	1974
6:45 am	144	769	55	319	199	1088	6:45 pm	192	829	282	1089	474	1918
7:00 am	171	879	78	368	249	1247	7:00 pm	237	828	289	1051	526	1879
7:15 am	206	990	86	428	292	1418	7:15 pm	184	784	262	998	446	1782
7:30 am	248	1104	100	451	348	1555	7:30 pm	216	769	256	982	472	1751
7:45 am	254	1169	104	485	358	1654	7:45 pm	191	699	244	930	435	1629
8:00 am	282	1213	138	517	420	1730	8:00 pm	193	658	236	928	429	1586
8:15 am	320	1247	109	509	429	1756	8:15 pm	169	596	246	912	415	1508
8:30 am	313	1204	134	534	447	1738	8:30 pm	146	539	204	859	350	1398
8:45 am	298	1181	136	538	434	1719	8:45 pm	150	507	242	834	392	1341
9:00 am	316	1147	130	546	446	1693	9:00 pm	131	466	220	763	351	1229
9:15 am	277	1086	134	574	411	1660	9:15 pm	112	429	193	716	305	1145
9:30 am	290	1033	138	587	428	1620	9:30 pm	114	416	179	692	293	1108
9:45 am	264	989	144	585	408	1574	9:45 pm	109	390	171	657	280	1047
10:00 am	255	967	158	605	413	1572	10:00 pm	94	369	173	605	267	974
10:15 am	224	912	147	598	371	1510	10:15 pm	99	345	169	547	268	892
10:30 am	246	893	136	625	382	1518	10:30 pm	88	311	144	478	232	789
10:45 am	242	877	164	677	406	1554	10:45 pm	88	285	119	416	207	701
11:00 am	200	867	151	681	351	1548	11:00 pm	70	259	115	380	185	639
11:15 am	205	877	174	712	379	1589	11:15 pm	65		100		165	
11:30 am	230	872	188	732	418	1604	11:30 pm	62		82		144	
11:45 am	232	858	168	729	400	1587	11:45 pm	62		83		145	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	28024	8:15 am	1756	5:30 pm	2137
N/B	14599	8:15 am	1247	5:15 pm	961
S/B	13425	11:30 am	732	5:45 pm	1219

Run Date: *08/25/2010*

Run Time: *9:13 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1J9-1K2

Page: 1

Count Date: 08/19/2010 12:00 am Thursday Condition: : Location: VIA MARINA S/O TAHITI WAY

Align Coord:

Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour	Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour
12:00 am	11	41	27	80	38	121	12:00 pm	90	368	78	308	168	676
12:15 am	14	32	20	67	34	99	12:15 pm	86	366	83	308	169	674
12:30 am	14	26	18	59	32	85	12:30 pm	96	375	82	315	178	690
12:45 am	2	16	15	56	17	72	12:45 pm	96	344	65	319	161	663
1:00 am	2	31	14	53	16	84	1:00 pm	88	329	78	315	166	644
1:15 am	8	39	12	53	20	92	1:15 pm	95	331	90	323	185	654
1:30 am	4	37	15	47	19	84	1:30 pm	65	310	86	321	151	631
1:45 am	17	39	12	40	29	79	1:45 pm	81	331	61	307	142	638
2:00 am	10	27	14	33	24	60	2:00 pm	90	323	86	344	176	667
2:15 am	6	17	6	23	12	40	2:15 pm	74	326	88	328	162	654
2:30 am	6	12	8	24	14	36	2:30 pm	86	334	72	340	158	674
2:45 am	5	10	5	23	10	33	2:45 pm	73	333	98	346	171	679
3:00 am	0	9	4	24	4	33	3:00 pm	93	328	70	341	163	669
3:15 am	1	13	7	21	8	34	3:15 pm	82	321	100	365	182	686
3:30 am	4	21	7	19	11	40	3:30 pm	85	333	78	351	163	684
3:45 am	4	23	6	16	10	39	3:45 pm	68	339	93	381	161	720
4:00 am	4	26	1	15	5	41	4:00 pm	86	351	94	380	180	731
4:15 am	9	30	5	19	14	49	4:15 pm	94	371	86	410	180	781
4:30 am	6	34	4	19	10	53	4:30 pm	91	381	108	428	199	809
4:45 am	7	44	5	22	12	66	4:45 pm	80	396	92	441	172	837
5:00 am	8	65	5	25	13	90	5:00 pm	106	400	124	489	230	889
5:15 am	13	82	5	28	18	110	5:15 pm	104	380	104	499	208	879
5:30 am	16	110	7	37	23	147	5:30 pm	106	357	121	531	227	888
5:45 am	28	148	8	52	36	200	5:45 pm	84	333	140	546	224	879
6:00 am	25	176	8	62	33	238	6:00 pm	86	335	134	542	220	877
6:15 am	41	214	14	89	55	303	6:15 pm	81	355	136	522	217	877
6:30 am	54	274	22	108	76	382	6:30 pm	82	348	136	511	218	859
6:45 am	56	313	18	122	74	435	6:45 pm	86	356	136	484	222	840
7:00 am	63	365	35	144	98	509	7:00 pm	106	342	114	460	220	802
7:15 am	101	430	33	161	134	591	7:15 pm	74	304	125	450	199	754
7:30 am	93	457	36	173	129	630	7:30 pm	90	292	109	411	199	703
7:45 am	108	495	40	195	148	690	7:45 pm	72	252	112	382	184	634
8:00 am	128	515	52	211	180	726	8:00 pm	68	232	104	379	172	611
8:15 am	128	494	45	218	173	712	8:15 pm	62	205	86	381	148	586
8:30 am	131	488	58	221	189	709	8:30 pm	50	193	80	363	130	556
8:45 am	128	471	56	219	184	690	8:45 pm	52	175	109	386	161	561
9:00 am	107	450	59	218	166	668	9:00 pm	41	164	106	355	147	519
9:15 am	122	435	48	224	170	659	9:15 pm	50	153	68	317	118	470
9:30 am	114	411	56	231	170	642	9:30 pm	32	140	103	315	135	455
9:45 am	107	385	55	237	162	622	9:45 pm	41	147	78	264	119	411
10:00 am	92	365	65	254	157	619	10:00 pm	30	132	68	236	98	368
10:15 am	98	346	55	248	153	594	10:15 pm	37	120	66	217	103	337
10:30 am	88	323	62	272	150	595	10:30 pm	39	108	52	199	91	307
10:45 am	87	330	72	278	159	608	10:45 pm	26	87	50	171	76	258
11:00 am	73	327	59	282	132	609	11:00 pm	18	77	49	153	67	230
11:15 am	75	344	79	301	154	645	11:15 pm	25		48		73	
11:30 am	95	355	68	305	163	660	11:30 pm	18		24		42	
11:45 am	84	356	76	319	160	675	11:45 pm	16		32		48	

24 Hour Direction	24 Hour Volume	AM Peak Hour Time	AM Peak Hour Volume	PM Peak Hour Time	PM Peak Hour Volume
Total	11481	8:00 am	726	5:00 pm	889
N/B	5778	8:00 am	515	5:00 pm	400
S/B	5703	11:45 am	319	5:45 pm	546

Run Date: *08/31/2010*

Run Time: *10:27 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1P4-1P7

Page: 1

Count Date: 08/26/2010 12:00 am Thursday   Condition: :   Location: ADMIRALTY WAY E/O PALAWAN WAY

Align Coord:

	E/B		W/B		Total			E/B		W/B		Total	
Time	15'	Hour	15'	Hour	15'	Hour	Time	15'	Hour	15'	Hour	15'	Hour
12:00 am	44	132	60	173	104	305	12:00 pm	210	845	233	924	443	1769
12:15 am	35	115	42	130	77	245	12:15 pm	210	863	230	937	440	1800
12:30 am	31	103	37	108	68	211	12:30 pm	196	869	232	995	428	1864
12:45 am	22	86	34	95	56	181	12:45 pm	229	915	229	984	458	1899
1:00 am	27	83	17	87	44	170	1:00 pm	228	931	246	985	474	1916
1:15 am	23	76	20	87	43	163	1:15 pm	216	941	288	965	504	1906
1:30 am	14	63	24	91	38	154	1:30 pm	242	951	221	912	463	1863
1:45 am	19	57	26	79	45	136	1:45 pm	245	949	230	964	475	1913
2:00 am	20	41	17	68	37	109	2:00 pm	238	919	226	973	464	1892
2:15 am	10	26	24	59	34	85	2:15 pm	226	925	235	975	461	1900
2:30 am	8	23	12	50	20	73	2:30 pm	240	958	273	986	513	1944
2:45 am	3	21	15	48	18	69	2:45 pm	215	999	239	959	454	1958
3:00 am	5	27	8	40	13	67	3:00 pm	244	1052	228	1004	472	2056
3:15 am	7	29	15	42	22	71	3:15 pm	259	1117	246	1012	505	2129
3:30 am	6	38	10	35	16	73	3:30 pm	281	1168	246	1069	527	2237
3:45 am	9	46	7	37	16	83	3:45 pm	268	1173	284	1115	552	2288
4:00 am	7	63	10	45	17	108	4:00 pm	309	1225	236	1161	545	2386
4:15 am	16	95	8	58	24	153	4:15 pm	310	1258	303	1242	613	2500
4:30 am	14	108	12	63	26	171	4:30 pm	286	1302	292	1287	578	2589
4:45 am	26	146	15	81	41	227	4:45 pm	320	1310	330	1361	650	2671
5:00 am	39	190	23	114	62	304	5:00 pm	342	1302	317	1389	659	2691
5:15 am	29	221	13	141	42	362	5:15 pm	354	1296	348	1478	702	2774
5:30 am	52	272	30	180	82	452	5:30 pm	294	1222	366	1546	660	2768
5:45 am	70	336	48	225	118	561	5:45 pm	312	1196	358	1520	670	2716
6:00 am	70	394	50	281	120	675	6:00 pm	336	1164	406	1544	742	2708
6:15 am	80	466	52	367	132	833	6:15 pm	280	1068	416	1456	696	2524
6:30 am	116	578	75	455	191	1033	6:30 pm	268	1031	340	1376	608	2407
6:45 am	128	678	104	564	232	1242	6:45 pm	280	988	382	1342	662	2330
7:00 am	142	784	136	689	278	1473	7:00 pm	240	942	318	1249	558	2191
7:15 am	192	902	140	764	332	1666	7:15 pm	243	907	336	1180	579	2087
7:30 am	216	982	184	851	400	1833	7:30 pm	225	838	306	1070	531	1908
7:45 am	234	1024	229	879	463	1903	7:45 pm	234	755	289	1000	523	1755
8:00 am	260	1071	211	888	471	1959	8:00 pm	205	686	249	913	454	1599
8:15 am	272	1077	227	939	499	2016	8:15 pm	174	615	226	862	400	1477
8:30 am	258	1049	212	914	470	1963	8:30 pm	142	586	236	836	378	1422
8:45 am	281	1035	238	902	519	1937	8:45 pm	165	563	202	788	367	1351
9:00 am	266	1002	262	901	528	1903	9:00 pm	134	501	198	751	332	1252
9:15 am	244	959	202	859	446	1818	9:15 pm	145	483	200	713	345	1196
9:30 am	244	945	200	841	444	1786	9:30 pm	119	428	188	652	307	1080
9:45 am	248	937	237	838	485	1775	9:45 pm	103	400	165	584	268	984
10:00 am	223	881	220	787	443	1668	10:00 pm	116	384	160	521	276	905
10:15 am	230	874	184	762	414	1636	10:15 pm	90	335	139	479	229	814
10:30 am	236	873	197	807	433	1680	10:30 pm	91	309	120	410	211	719
10:45 am	192	851	186	820	378	1671	10:45 pm	87	278	102	349	189	627
11:00 am	216	859	195	887	411	1746	11:00 pm	67	253	118	320	185	573
11:15 am	229	853	229	925	458	1778	11:15 pm	64		70		134	
11:30 am	214	834	210	926	424	1760	11:30 pm	60		59		119	
11:45 am	200	816	253	948	453	1764	11:45 pm	62		73		135	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	32425	8:15 am	2016	5:15 pm	2774
E/B	15731	8:15 am	1077	4:45 pm	1310
W/B	16694	11:45 am	948	5:30 pm	1546

Run Date: *08/31/2010*
Run Time: *10:26 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1Q2-1Q5
Page: 1

Count Date: 08/26/2010 12:00 am Thursday   Condition: :   Location: MINDANAO WAY E/O ADMIRALTY WAY
Align Coord:

Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour	Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour
12:00 am	33	111	31	124	64	235	12:00 pm	118	589	202	781	320	1370
12:15 am	28	102	32	118	60	220	12:15 pm	166	655	172	784	338	1439
12:30 am	20	88	27	104	47	192	12:30 pm	151	645	195	826	346	1471
12:45 am	30	80	34	89	64	169	12:45 pm	154	692	212	802	366	1494
1:00 am	24	61	25	75	49	136	1:00 pm	184	738	205	758	389	1496
1:15 am	14	46	18	62	32	108	1:15 pm	156	742	214	723	370	1465
1:30 am	12	37	12	66	24	103	1:30 pm	198	762	171	673	369	1435
1:45 am	11	27	20	68	31	95	1:45 pm	200	730	168	686	368	1416
2:00 am	9	27	12	54	21	81	2:00 pm	188	694	170	666	358	1360
2:15 am	5	24	22	53	27	77	2:15 pm	176	660	164	662	340	1322
2:30 am	2	29	14	41	16	70	2:30 pm	166	628	184	669	350	1297
2:45 am	11	31	6	32	17	63	2:45 pm	164	608	148	665	312	1273
3:00 am	6	24	11	36	17	60	3:00 pm	154	611	166	683	320	1294
3:15 am	10	26	10	31	20	57	3:15 pm	144	604	171	673	315	1277
3:30 am	4	26	5	24	9	50	3:30 pm	146	656	180	676	326	1332
3:45 am	4	25	10	31	14	56	3:45 pm	167	665	166	676	333	1341
4:00 am	8	35	6	40	14	75	4:00 pm	147	634	156	698	303	1332
4:15 am	10	43	3	62	13	105	4:15 pm	196	643	174	732	370	1375
4:30 am	3	59	12	91	15	150	4:30 pm	155	607	180	753	335	1360
4:45 am	14	85	19	100	33	185	4:45 pm	136	628	188	782	324	1410
5:00 am	16	105	28	112	44	217	5:00 pm	156	654	190	801	346	1455
5:15 am	26	136	32	127	58	263	5:15 pm	160	656	195	813	355	1469
5:30 am	29	154	21	144	50	298	5:30 pm	176	654	209	814	385	1468
5:45 am	34	175	31	187	65	362	5:45 pm	162	604	207	797	369	1401
6:00 am	47	203	43	242	90	445	6:00 pm	158	572	202	792	360	1364
6:15 am	44	218	49	301	93	519	6:15 pm	158	538	196	768	354	1306
6:30 am	50	251	64	326	114	577	6:30 pm	126	516	192	728	318	1244
6:45 am	62	286	86	382	148	668	6:45 pm	130	535	202	712	332	1247
7:00 am	62	337	102	434	164	771	7:00 pm	124	557	178	678	302	1235
7:15 am	77	392	74	481	151	873	7:15 pm	136	593	156	665	292	1258
7:30 am	85	441	120	533	205	974	7:30 pm	145	601	176	653	321	1254
7:45 am	113	478	138	539	251	1017	7:45 pm	152	590	168	597	320	1187
8:00 am	117	494	149	565	266	1059	8:00 pm	160	568	165	551	325	1119
8:15 am	126	507	126	558	252	1065	8:15 pm	144	535	144	509	288	1044
8:30 am	122	500	126	570	248	1070	8:30 pm	134	523	120	477	254	1000
8:45 am	129	506	164	574	293	1080	8:45 pm	130	497	122	446	252	943
9:00 am	130	509	142	569	272	1078	9:00 pm	127	463	123	424	250	887
9:15 am	119	501	138	551	257	1052	9:15 pm	132	418	112	389	244	807
9:30 am	128	510	130	561	258	1071	9:30 pm	108	370	89	342	197	712
9:45 am	132	506	159	572	291	1078	9:45 pm	96	328	100	310	196	638
10:00 am	122	502	124	597	246	1099	10:00 pm	82	288	88	276	170	564
10:15 am	128	506	148	629	276	1135	10:15 pm	84	266	65	253	149	519
10:30 am	124	520	141	635	265	1155	10:30 pm	66	232	57	226	123	458
10:45 am	128	534	184	665	312	1199	10:45 pm	56	208	66	208	122	416
11:00 am	126	546	156	643	282	1189	11:00 pm	60	181	65	180	125	361
11:15 am	142	538	154	689	296	1227	11:15 pm	50		38		88	
11:30 am	138	562	171	707	309	1269	11:30 pm	42		39		81	
11:45 am	140	575	162	731	302	1306	11:45 pm	29		38		67	

24 Hour Direction	24 Hour Volume	AM Peak Hour Time	AM Peak Hour Volume	PM Peak Hour Time	PM Peak Hour Volume
Total	20282	11:45 am	1306	1:00 pm	1496
E/B	9503	11:45 am	575	1:30 pm	762
W/B	10779	11:45 am	731	12:30 pm	826

APPENDIX B

AUGUST 2010 WEEKEND MACHINE COUNTS – FROM LACDPW

Run Date: *08/25/2010*
Run Time: *9:09 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1A5-1A8
Page: 1

Count Date: 08/14/2010 12:00 am Saturday   Condition: :   Location: FIJI WAY E/O ADMIRALTY WAY
Align Coord:

Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour	Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour
12:00 am	45	139	16	68	61	207	12:00 pm	116	596	144	596	260	1192
12:15 am	29	128	22	63	51	191	12:15 pm	169	630	162	612	331	1242
12:30 am	36	127	16	57	52	184	12:30 pm	127	598	146	576	273	1174
12:45 am	29	112	14	47	43	159	12:45 pm	184	621	144	573	328	1194
1:00 am	34	111	11	41	45	152	1:00 pm	150	587	160	560	310	1147
1:15 am	28	112	16	40	44	152	1:15 pm	137	622	126	530	263	1152
1:30 am	21	111	6	30	27	141	1:30 pm	150	666	143	542	293	1208
1:45 am	28	104	8	38	36	142	1:45 pm	150	706	131	518	281	1224
2:00 am	35	82	10	31	45	113	2:00 pm	185	741	130	514	315	1255
2:15 am	27	54	6	25	33	79	2:15 pm	181	738	138	515	319	1253
2:30 am	14	29	14	24	28	53	2:30 pm	190	745	119	498	309	1243
2:45 am	6	19	1	11	7	30	2:45 pm	185	734	127	505	312	1239
3:00 am	7	19	4	14	11	33	3:00 pm	182	767	131	507	313	1274
3:15 am	2	14	5	16	7	30	3:15 pm	188	781	121	486	309	1267
3:30 am	4	15	1	15	5	30	3:30 pm	179	763	126	493	305	1256
3:45 am	6	17	4	21	10	38	3:45 pm	218	762	129	493	347	1255
4:00 am	2	20	6	26	8	46	4:00 pm	196	730	110	483	306	1213
4:15 am	3	29	4	25	7	54	4:15 pm	170	714	128	513	298	1227
4:30 am	6	36	7	39	13	75	4:30 pm	178	747	126	507	304	1254
4:45 am	9	42	9	51	18	93	4:45 pm	186	769	119	501	305	1270
5:00 am	11	51	5	65	16	116	5:00 pm	180	717	140	506	320	1223
5:15 am	10	59	18	83	28	142	5:15 pm	203	707	122	496	325	1203
5:30 am	12	67	19	95	31	162	5:30 pm	200	656	120	506	320	1162
5:45 am	18	72	23	110	41	182	5:45 pm	134	624	124	520	258	1144
6:00 am	19	76	23	128	42	204	6:00 pm	170	632	130	538	300	1170
6:15 am	18	93	30	139	48	232	6:15 pm	152	602	132	524	284	1126
6:30 am	17	107	34	153	51	260	6:30 pm	168	582	134	481	302	1063
6:45 am	22	134	41	167	63	301	6:45 pm	142	539	142	435	284	974
7:00 am	36	170	34	197	70	367	7:00 pm	140	514	116	385	256	899
7:15 am	32	188	44	223	76	411	7:15 pm	132	504	89	358	221	862
7:30 am	44	217	48	235	92	452	7:30 pm	125	500	88	333	213	833
7:45 am	58	227	71	244	129	471	7:45 pm	117	477	92	317	209	794
8:00 am	54	233	60	265	114	498	8:00 pm	130	460	89	311	219	771
8:15 am	61	265	56	275	117	540	8:15 pm	128	441	64	283	192	724
8:30 am	54	290	57	293	111	583	8:30 pm	102	405	72	291	174	696
8:45 am	64	333	92	330	156	663	8:45 pm	100	395	86	289	186	684
9:00 am	86	364	70	322	156	686	9:00 pm	111	377	61	269	172	646
9:15 am	86	384	74	366	160	750	9:15 pm	92	342	72	264	164	606
9:30 am	97	419	94	428	191	847	9:30 pm	92	336	70	233	162	569
9:45 am	95	418	84	446	179	864	9:45 pm	82	314	66	196	148	510
10:00 am	106	429	114	493	220	922	10:00 pm	76	316	56	165	132	481
10:15 am	121	431	136	507	257	938	10:15 pm	86	330	41	151	127	481
10:30 am	96	404	112	495	208	899	10:30 pm	70	304	33	140	103	444
10:45 am	106	434	131	507	237	941	10:45 pm	84	295	35	133	119	428
11:00 am	108	448	128	525	236	973	11:00 pm	90	261	42	128	132	389
11:15 am	94	456	124	541	218	997	11:15 pm	60		30		90	
11:30 am	126	531	124	579	250	1110	11:30 pm	61		26		87	
11:45 am	120	532	149	601	269	1133	11:45 pm	50		30		80	

24 Hour Direction	24 Hour Volume	AM Peak Hour Time	AM Peak Hour Volume	PM Peak Hour Time	PM Peak Hour Volume
Total	15977	11:45 am	1133	3:00 pm	1274
E/B	8840	11:45 am	532	3:15 pm	781
W/B	7137	11:45 am	601	12:15 pm	612

Run Date: *08/25/2010*

Run Time: *9:09 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1A5-1A8

Page: 1

Count Date: 08/15/2010 12:00 am Sunday Condition: : Location: FIJI WAY E/O ADMIRALTY WAY

Align Coord:

	E/B		W/B		Total			E/B		W/B		Total	
Time	15'	Hour	15'	Hour	15'	Hour	Time	15'	Hour	15'	Hour	15'	Hour
12:00 am	82	182	28	73	110	255	12:00 pm	116	554	111	529	227	1083
12:15 am	47	124	20	54	67	178	12:15 pm	116	562	137	534	253	1096
12:30 am	24	98	13	45	37	143	12:30 pm	167	578	142	531	309	1109
12:45 am	29	97	12	41	41	138	12:45 pm	155	561	139	508	294	1069
1:00 am	24	88	9	37	33	125	1:00 pm	124	560	116	515	240	1075
1:15 am	21	72	11	36	32	108	1:15 pm	132	588	134	525	266	1113
1:30 am	23	66	9	35	32	101	1:30 pm	150	601	119	505	269	1106
1:45 am	20	49	8	28	28	77	1:45 pm	154	610	146	524	300	1134
2:00 am	8	36	8	24	16	60	2:00 pm	152	602	126	514	278	1116
2:15 am	15	32	10	19	25	51	2:15 pm	145	605	114	526	259	1131
2:30 am	6	18	2	11	8	29	2:30 pm	159	626	138	532	297	1158
2:45 am	7	15	4	11	11	26	2:45 pm	146	653	136	524	282	1177
3:00 am	4	10	3	11	7	21	3:00 pm	155	676	138	523	293	1199
3:15 am	1	12	2	10	3	22	3:15 pm	166	683	120	517	286	1200
3:30 am	3	12	2	13	5	25	3:30 pm	186	700	130	532	316	1232
3:45 am	2	17	4	18	6	35	3:45 pm	169	686	135	512	304	1198
4:00 am	6	25	2	22	8	47	4:00 pm	162	712	132	505	294	1217
4:15 am	1	29	5	29	6	58	4:15 pm	183	730	135	475	318	1205
4:30 am	8	32	7	32	15	64	4:30 pm	172	755	110	474	282	1229
4:45 am	10	37	8	43	18	80	4:45 pm	195	755	128	482	323	1237
5:00 am	10	42	9	51	19	93	5:00 pm	180	734	102	447	282	1181
5:15 am	4	46	8	58	12	104	5:15 pm	208	724	134	443	342	1167
5:30 am	13	57	18	68	31	125	5:30 pm	172	710	118	421	290	1131
5:45 am	15	62	16	80	31	142	5:45 pm	174	716	93	399	267	1115
6:00 am	14	63	16	90	30	153	6:00 pm	170	683	98	392	268	1075
6:15 am	15	71	18	108	33	179	6:15 pm	194	669	112	391	306	1060
6:30 am	18	89	30	122	48	211	6:30 pm	178	621	96	363	274	984
6:45 am	16	103	26	131	42	234	6:45 pm	141	563	86	363	227	926
7:00 am	22	122	34	141	56	263	7:00 pm	156	532	97	355	253	887
7:15 am	33	132	32	146	65	278	7:15 pm	146	510	84	358	230	868
7:30 am	32	134	39	152	71	286	7:30 pm	120	470	96	358	216	828
7:45 am	35	138	36	163	71	301	7:45 pm	110	470	78	337	188	807
8:00 am	32	165	39	180	71	345	8:00 pm	134	462	100	323	234	785
8:15 am	35	192	38	203	73	395	8:15 pm	106	425	84	288	190	713
8:30 am	36	229	50	231	86	460	8:30 pm	120	419	75	262	195	681
8:45 am	62	263	53	259	115	522	8:45 pm	102	383	64	230	166	613
9:00 am	59	287	62	307	121	594	9:00 pm	97	358	65	212	162	570
9:15 am	72	300	66	342	138	642	9:15 pm	100	324	58	191	158	515
9:30 am	70	312	78	351	148	663	9:30 pm	84	276	43	178	127	454
9:45 am	86	327	101	368	187	695	9:45 pm	77	237	46	173	123	410
10:00 am	72	333	97	389	169	722	10:00 pm	63	199	44	150	107	349
10:15 am	84	357	75	402	159	759	10:15 pm	52	188	45	130	97	318
10:30 am	85	383	95	457	180	840	10:30 pm	45	197	38	117	83	314
10:45 am	92	404	122	493	214	897	10:45 pm	39	174	23	88	62	262
11:00 am	96	419	110	503	206	922	11:00 pm	52	156	24	76	76	232
11:15 am	110	439	130	504	240	943	11:15 pm	61		32		93	
11:30 am	106	445	131	511	237	956	11:30 pm	22		9		31	
11:45 am	107	506	132	522	239	1028	11:45 pm	21		11		32	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	14369	11:45 am	1028	4:45 pm	1237
E/B	8000	11:45 am	506	4:30 pm	755
W/B	6369	11:45 am	522	12:15 pm	534

Run Date: *08/25/2010*

Run Time: *9:07 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: Z89-Z92

Page: 1

Count Date: 08/14/2010 12:00 am Saturday   Condition: :   Location: ADMIRALTY WAY N/O MINDANAO WAY

Align Coord:

	N/B		S/B		Total			N/B		S/B		Total	
Time	15'	Hour	15'	Hour	15'	Hour	Time	15'	Hour	15'	Hour	15'	Hour
12:00 am	57	215	76	212	133	427	12:00 pm	235	1013	236	997	471	2010
12:15 am	70	193	52	183	122	376	12:15 pm	256	1033	248	1005	504	2038
12:30 am	48	157	42	184	90	341	12:30 pm	254	1050	255	969	509	2019
12:45 am	40	128	42	185	82	313	12:45 pm	268	1071	258	951	526	2022
1:00 am	35	111	47	188	82	299	1:00 pm	255	1079	244	947	499	2026
1:15 am	34	108	53	205	87	313	1:15 pm	273	1097	212	945	485	2042
1:30 am	19	94	43	196	62	290	1:30 pm	275	1086	237	960	512	2046
1:45 am	23	97	45	176	68	273	1:45 pm	276	1063	254	964	530	2027
2:00 am	32	88	64	142	96	230	2:00 pm	273	1041	242	952	515	1993
2:15 am	20	58	44	85	64	143	2:15 pm	262	1004	227	948	489	1952
2:30 am	22	48	23	55	45	103	2:30 pm	252	998	241	983	493	1981
2:45 am	14	37	11	43	25	80	2:45 pm	254	998	242	960	496	1958
3:00 am	2	33	7	41	9	74	3:00 pm	236	964	238	950	474	1914
3:15 am	10	40	14	46	24	86	3:15 pm	256	971	262	944	518	1915
3:30 am	11	41	11	37	22	78	3:30 pm	252	974	218	915	470	1889
3:45 am	10	41	9	38	19	79	3:45 pm	220	958	232	961	452	1919
4:00 am	9	42	12	48	21	90	4:00 pm	243	989	232	961	475	1950
4:15 am	11	45	5	49	16	94	4:15 pm	259	993	233	971	492	1964
4:30 am	11	50	12	58	23	108	4:30 pm	236	922	264	991	500	1913
4:45 am	11	61	19	76	30	137	4:45 pm	251	929	232	968	483	1897
5:00 am	12	88	13	83	25	171	5:00 pm	247	904	242	954	489	1858
5:15 am	16	99	14	99	30	198	5:15 pm	188	907	253	914	441	1821
5:30 am	22	127	30	121	52	248	5:30 pm	243	941	241	883	484	1824
5:45 am	38	161	26	135	64	296	5:45 pm	226	904	218	879	444	1783
6:00 am	23	174	29	149	52	323	6:00 pm	250	885	202	919	452	1804
6:15 am	44	207	36	183	80	390	6:15 pm	222	809	222	931	444	1740
6:30 am	56	237	44	201	100	438	6:30 pm	206	779	237	911	443	1690
6:45 am	51	249	40	233	91	482	6:45 pm	207	737	258	862	465	1599
7:00 am	56	306	63	295	119	601	7:00 pm	174	716	214	768	388	1484
7:15 am	74	351	54	337	128	688	7:15 pm	192	738	202	734	394	1472
7:30 am	68	374	76	412	144	786	7:30 pm	164	694	188	696	352	1390
7:45 am	108	427	102	456	210	883	7:45 pm	186	698	164	646	350	1344
8:00 am	101	469	105	493	206	962	8:00 pm	196	674	180	632	376	1306
8:15 am	97	524	129	546	226	1070	8:15 pm	148	642	164	550	312	1192
8:30 am	121	599	120	593	241	1192	8:30 pm	168	667	138	508	306	1175
8:45 am	150	656	139	647	289	1303	8:45 pm	162	655	150	492	312	1147
9:00 am	156	692	158	706	314	1398	9:00 pm	164	621	98	456	262	1077
9:15 am	172	730	176	748	348	1478	9:15 pm	173	589	122	472	295	1061
9:30 am	178	800	174	758	352	1558	9:30 pm	156	536	122	473	278	1009
9:45 am	186	833	198	800	384	1633	9:45 pm	128	500	114	432	242	932
10:00 am	194	884	200	824	394	1708	10:00 pm	132	464	114	412	246	876
10:15 am	242	926	186	836	428	1762	10:15 pm	120	438	123	383	243	821
10:30 am	211	901	216	855	427	1756	10:30 pm	120	404	81	341	201	745
10:45 am	237	928	222	845	459	1773	10:45 pm	92	364	94	360	186	724
11:00 am	236	959	212	835	448	1794	11:00 pm	106	348	85	329	191	677
11:15 am	217	958	205	859	422	1817	11:15 pm	86		81		167	
11:30 am	238	997	206	902	444	1899	11:30 pm	80		100		180	
11:45 am	268	1013	212	951	480	1964	11:45 pm	76		63		139	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	27052	11:45 am	1964	1:30 pm	2046
N/B	13759	11:45 am	1013	1:15 pm	1097
S/B	13293	11:45 am	951	12:15 pm	1005

Run Date: *08/25/2010*

Run Time: *9:07 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: Z89-Z92

Page: 1

Count Date: 08/15/2010 12:00 am Sunday   Condition: :   Location: ADMIRALTY WAY N/O MINDANAO WAY

Align Coord:

Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour	Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour
12:00 am	80	225	78	239	158	464	12:00 pm	252	964	209	830	461	1794
12:15 am	54	187	56	206	110	393	12:15 pm	231	914	200	847	431	1761
12:30 am	45	169	56	199	101	368	12:30 pm	238	906	186	851	424	1757
12:45 am	46	157	49	192	95	349	12:45 pm	243	928	235	875	478	1803
1:00 am	42	142	45	179	87	321	1:00 pm	202	943	226	876	428	1819
1:15 am	36	122	49	167	85	289	1:15 pm	223	1007	204	852	427	1859
1:30 am	33	107	49	141	82	248	1:30 pm	260	1036	210	858	470	1894
1:45 am	31	87	36	119	67	206	1:45 pm	258	1004	236	883	494	1887
2:00 am	22	70	33	95	55	165	2:00 pm	266	990	202	831	468	1821
2:15 am	21	63	23	71	44	134	2:15 pm	252	968	210	813	462	1781
2:30 am	13	57	27	56	40	113	2:30 pm	228	946	235	815	463	1761
2:45 am	14	54	12	33	26	87	2:45 pm	244	951	184	790	428	1741
3:00 am	15	51	9	26	24	77	3:00 pm	244	959	184	814	428	1773
3:15 am	15	44	8	25	23	69	3:15 pm	230	947	212	852	442	1799
3:30 am	10	42	4	24	14	66	3:30 pm	233	959	210	858	443	1817
3:45 am	11	46	5	31	16	77	3:45 pm	252	946	208	898	460	1844
4:00 am	8	47	8	40	16	87	4:00 pm	232	929	222	912	454	1841
4:15 am	13	51	7	46	20	97	4:15 pm	242	931	218	924	460	1855
4:30 am	14	49	11	46	25	95	4:30 pm	220	911	250	923	470	1834
4:45 am	12	50	14	60	26	110	4:45 pm	235	913	222	887	457	1800
5:00 am	12	58	14	69	26	127	5:00 pm	234	902	234	873	468	1775
5:15 am	11	63	7	87	18	150	5:15 pm	222	897	217	839	439	1736
5:30 am	15	83	25	116	40	199	5:30 pm	222	867	214	890	436	1757
5:45 am	20	112	23	118	43	230	5:45 pm	224	855	208	941	432	1796
6:00 am	17	130	32	141	49	271	6:00 pm	229	813	200	961	429	1774
6:15 am	31	149	36	153	67	302	6:15 pm	192	768	268	959	460	1727
6:30 am	44	160	27	171	71	331	6:30 pm	210	773	265	879	475	1652
6:45 am	38	173	46	200	84	373	6:45 pm	182	743	228	799	410	1542
7:00 am	36	189	44	229	80	418	7:00 pm	184	742	198	764	382	1506
7:15 am	42	223	54	258	96	481	7:15 pm	197	729	188	754	385	1483
7:30 am	57	243	56	292	113	535	7:30 pm	180	716	185	754	365	1470
7:45 am	54	254	75	342	129	596	7:45 pm	181	712	193	716	374	1428
8:00 am	70	299	73	377	143	676	8:00 pm	171	686	188	677	359	1363
8:15 am	62	317	88	424	150	741	8:15 pm	184	658	188	627	372	1285
8:30 am	68	375	106	477	174	852	8:30 pm	176	610	147	567	323	1177
8:45 am	99	450	110	487	209	937	8:45 pm	155	550	154	523	309	1073
9:00 am	88	521	120	537	208	1058	9:00 pm	143	521	138	461	281	982
9:15 am	120	601	141	579	261	1180	9:15 pm	136	481	128	413	264	894
9:30 am	143	633	116	588	259	1221	9:30 pm	116	446	103	371	219	817
9:45 am	170	654	160	656	330	1310	9:45 pm	126	422	92	328	218	750
10:00 am	168	688	162	673	330	1361	10:00 pm	103	362	90	303	193	665
10:15 am	152	710	150	691	302	1401	10:15 pm	101	330	86	299	187	629
10:30 am	164	764	184	734	348	1498	10:30 pm	92	284	60	275	152	559
10:45 am	204	830	177	750	381	1580	10:45 pm	66	224	67	263	133	487
11:00 am	190	860	180	787	370	1647	11:00 pm	71	195	86	237	157	432
11:15 am	206	922	193	816	399	1738	11:15 pm	55		62		117	
11:30 am	230	947	200	823	430	1770	11:30 pm	32		48		80	
11:45 am	234	955	214	809	448	1764	11:45 pm	37		41		78	

24 Hour Direction	Volume	AM Peak Hour Time	Volume	PM Peak Hour Time	Volume
Total	24217	11:30 am	1770	1:30 pm	1894
N/B	12286	11:45 am	955	1:30 pm	1036
S/B	11931	11:30 am	823	6:00 pm	961

Run Date: *08/25/2010*
Run Time: *9:07 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: Z85-Z88
Page: 1

Count Date: 08/14/2010 12:00 am Saturday   Condition: :   Location: ADMIRALTY WAY N/O FIJI WAY
Align Coord:

Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour	Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour
12:00 am	15	74	36	118	51	192	12:00 pm	116	564	134	586	250	1150
12:15 am	23	75	28	110	51	185	12:15 pm	138	591	152	606	290	1197
12:30 am	21	68	27	103	48	171	12:30 pm	140	601	140	574	280	1175
12:45 am	15	54	27	94	42	148	12:45 pm	170	613	160	561	330	1174
1:00 am	16	51	28	95	44	146	1:00 pm	143	587	154	563	297	1150
1:15 am	16	43	21	100	37	143	1:15 pm	148	607	120	562	268	1169
1:30 am	7	33	18	111	25	144	1:30 pm	152	597	127	584	279	1181
1:45 am	12	40	28	107	40	147	1:45 pm	144	585	162	615	306	1200
2:00 am	8	29	33	84	41	113	2:00 pm	163	588	153	608	316	1196
2:15 am	6	25	32	59	38	84	2:15 pm	138	562	142	599	280	1161
2:30 am	14	21	14	29	28	50	2:30 pm	140	574	158	621	298	1195
2:45 am	1	8	5	18	6	26	2:45 pm	147	572	155	599	302	1171
3:00 am	4	10	8	20	12	30	3:00 pm	137	548	144	608	281	1156
3:15 am	2	8	2	18	4	26	3:15 pm	150	533	164	614	314	1147
3:30 am	1	11	3	20	4	31	3:30 pm	138	519	136	584	274	1103
3:45 am	3	14	7	35	10	49	3:45 pm	123	511	164	608	287	1119
4:00 am	2	17	6	42	8	59	4:00 pm	122	510	150	590	272	1100
4:15 am	5	17	4	56	9	73	4:15 pm	136	526	134	612	270	1138
4:30 am	4	20	18	61	22	81	4:30 pm	130	515	160	628	290	1143
4:45 am	6	30	14	61	20	91	4:45 pm	122	507	146	622	268	1129
5:00 am	2	42	20	83	22	125	5:00 pm	138	490	172	610	310	1100
5:15 am	8	51	9	93	17	144	5:15 pm	125	467	150	570	275	1037
5:30 am	14	67	18	110	32	177	5:30 pm	122	453	154	546	276	999
5:45 am	18	69	36	123	54	192	5:45 pm	105	450	134	556	239	1006
6:00 am	11	74	30	133	41	207	6:00 pm	115	439	132	570	247	1009
6:15 am	24	80	26	142	50	222	6:15 pm	111	414	126	582	237	996
6:30 am	16	88	31	156	47	244	6:30 pm	119	396	164	571	283	967
6:45 am	23	102	46	171	69	273	6:45 pm	94	363	148	523	242	886
7:00 am	17	133	39	185	56	318	7:00 pm	90	353	144	463	234	816
7:15 am	32	161	40	198	72	359	7:15 pm	93	368	115	417	208	785
7:30 am	30	168	46	224	76	392	7:30 pm	86	347	116	405	202	752
7:45 am	54	184	60	246	114	430	7:45 pm	84	333	88	356	172	689
8:00 am	45	200	52	260	97	460	8:00 pm	105	335	98	356	203	691
8:15 am	39	232	66	294	105	526	8:15 pm	72	308	103	334	175	642
8:30 am	46	263	68	314	114	577	8:30 pm	72	314	67	295	139	609
8:45 am	70	287	74	338	144	625	8:45 pm	86	311	88	293	174	604
9:00 am	77	297	86	376	163	673	9:00 pm	78	279	76	266	154	545
9:15 am	70	310	86	414	156	724	9:15 pm	78	263	64	242	142	505
9:30 am	70	366	92	436	162	802	9:30 pm	69	238	65	228	134	466
9:45 am	80	394	112	460	192	854	9:45 pm	54	218	61	202	115	420
10:00 am	90	446	124	464	214	910	10:00 pm	62	201	52	193	114	394
10:15 am	126	470	108	463	234	933	10:15 pm	53	184	50	185	103	369
10:30 am	98	452	116	467	214	919	10:30 pm	49	169	39	173	88	342
10:45 am	132	464	116	488	248	952	10:45 pm	37	150	52	179	89	329
11:00 am	114	480	123	508	237	988	11:00 pm	45	143	44	159	89	302
11:15 am	108	482	112	519	220	1001	11:15 pm	38		38		76	
11:30 am	110	512	137	559	247	1071	11:30 pm	30		45		75	
11:45 am	148	542	136	562	284	1104	11:45 pm	30		32		62	

24 Hour Direction	Volume	AM Peak Hour Time	Volume	PM Peak Hour Time	Volume
Total	14830	11:45 am	1104	1:45 pm	1200
N/B	6890	11:45 am	542	12:45 pm	613
S/B	7940	11:45 am	562	4:30 pm	628

Run Date: *08/25/2010*

Run Time: *9:07 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: Z85-Z88

Page: 1

Count Date: 08/15/2010 12:00 am Sunday   Condition: :   Location: ADMIRALTY WAY N/O FIJI WAY

Align Coord:

	N/B		S/B		Total			N/B		S/B		Total	
Time	15'	Hour	15'	Hour	15'	Hour	Time	15'	Hour	15'	Hour	15'	Hour
12:00 am	34	81	44	104	78	185	12:00 pm	98	468	106	522	204	990
12:15 am	21	58	24	78	45	136	12:15 pm	116	468	126	565	242	1033
12:30 am	14	46	19	72	33	118	12:30 pm	126	483	144	565	270	1048
12:45 am	12	40	17	70	29	110	12:45 pm	128	489	146	553	274	1042
1:00 am	11	34	18	69	29	103	1:00 pm	98	511	149	561	247	1072
1:15 am	9	33	18	65	27	98	1:15 pm	131	547	126	530	257	1077
1:30 am	8	34	17	57	25	91	1:30 pm	132	546	132	548	264	1094
1:45 am	6	28	16	46	22	74	1:45 pm	150	547	154	550	304	1097
2:00 am	10	25	14	36	24	61	2:00 pm	134	534	118	527	252	1061
2:15 am	10	18	10	27	20	45	2:15 pm	130	538	144	523	274	1061
2:30 am	2	10	6	18	8	28	2:30 pm	133	525	134	507	267	1032
2:45 am	3	9	6	17	9	26	2:45 pm	137	525	131	519	268	1044
3:00 am	3	10	5	13	8	23	3:00 pm	138	517	114	510	252	1027
3:15 am	2	9	1	14	3	23	3:15 pm	117	514	128	523	245	1037
3:30 am	1	11	5	16	6	27	3:30 pm	133	529	146	505	279	1034
3:45 am	4	15	2	18	6	33	3:45 pm	129	508	122	515	251	1023
4:00 am	2	16	6	26	8	42	4:00 pm	135	505	127	545	262	1050
4:15 am	4	22	3	41	7	63	4:15 pm	132	497	110	573	242	1070
4:30 am	5	21	7	42	12	63	4:30 pm	112	504	156	599	268	1103
4:45 am	5	24	10	59	15	83	4:45 pm	126	506	152	601	278	1107
5:00 am	8	27	21	65	29	92	5:00 pm	127	478	155	565	282	1043
5:15 am	3	25	4	56	7	81	5:15 pm	139	452	136	558	275	1010
5:30 am	8	35	24	78	32	113	5:30 pm	114	406	158	584	272	990
5:45 am	8	45	16	72	24	117	5:45 pm	98	405	116	574	214	979
6:00 am	6	52	12	82	18	134	6:00 pm	101	382	148	586	249	968
6:15 am	13	68	26	99	39	167	6:15 pm	93	376	162	570	255	946
6:30 am	18	73	18	103	36	176	6:30 pm	113	381	148	516	261	897
6:45 am	15	77	26	127	41	204	6:45 pm	75	360	128	468	203	828
7:00 am	22	88	29	147	51	235	7:00 pm	95	371	132	438	227	809
7:15 am	18	95	30	153	48	248	7:15 pm	98	366	108	422	206	788
7:30 am	22	101	42	170	64	271	7:30 pm	92	354	100	414	192	768
7:45 am	26	104	46	203	72	307	7:45 pm	86	345	98	403	184	748
8:00 am	29	112	35	220	64	332	8:00 pm	90	314	116	379	206	693
8:15 am	24	121	47	255	71	376	8:15 pm	86	296	100	325	186	621
8:30 am	25	156	75	280	100	436	8:30 pm	83	269	89	294	172	563
8:45 am	34	191	63	272	97	463	8:45 pm	55	234	74	254	129	488
9:00 am	38	239	70	295	108	534	9:00 pm	72	231	62	222	134	453
9:15 am	59	271	72	311	131	582	9:15 pm	59	197	69	204	128	401
9:30 am	60	273	67	336	127	609	9:30 pm	48	193	49	175	97	368
9:45 am	82	289	86	366	168	655	9:45 pm	52	175	42	156	94	331
10:00 am	70	311	86	388	156	699	10:00 pm	38	146	44	149	82	295
10:15 am	61	338	97	426	158	764	10:15 pm	55	141	40	143	95	284
10:30 am	76	373	97	447	173	820	10:30 pm	30	124	30	135	60	259
10:45 am	104	407	108	468	212	875	10:45 pm	23	110	35	124	58	234
11:00 am	97	402	124	490	221	892	11:00 pm	33	100	38	110	71	210
11:15 am	96	403	118	472	214	875	11:15 pm	38		32		70	
11:30 am	110	423	118	480	228	903	11:30 pm	16		19		35	
11:45 am	99	439	130	506	229	945	11:45 pm	13		21		34	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	13003	11:45 am	945	4:45 pm	1107
N/B	5954	11:45 am	439	1:15 pm	547
S/B	7049	11:45 am	506	4:45 pm	601

Run Date: 08/25/2010
Run Time: 9:07 AM

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: Z93-Z96
Page: 1

Count Date: 08/14/2010 12:00 am Saturday   Condition: :   Location: ADMIRALTY WAY W/O PALAWAN WAY
Align Coord:

	E/B		W/B		Total			E/B		W/B		Total	
Time	15'	Hour	15'	Hour	15'	Hour	Time	15'	Hour	15'	Hour	15'	Hour
12:00 am	75	233	78	271	153	504	12:00 pm	236	981	276	1110	512	2091
12:15 am	50	201	70	231	120	432	12:15 pm	249	979	235	1100	484	2079
12:30 am	60	208	64	209	124	417	12:30 pm	240	962	303	1108	543	2070
12:45 am	48	188	59	180	107	368	12:45 pm	256	942	296	1099	552	2041
1:00 am	43	194	38	164	81	358	1:00 pm	234	944	266	1101	500	2045
1:15 am	57	181	48	174	105	355	1:15 pm	232	955	243	1126	475	2081
1:30 am	40	150	35	158	75	308	1:30 pm	220	947	294	1161	514	2108
1:45 am	54	130	43	143	97	273	1:45 pm	258	982	298	1131	556	2113
2:00 am	30	83	48	119	78	202	2:00 pm	245	990	291	1115	536	2105
2:15 am	26	61	32	81	58	142	2:15 pm	224	1005	278	1073	502	2078
2:30 am	20	46	20	61	40	107	2:30 pm	255	1054	264	1056	519	2110
2:45 am	7	35	19	59	26	94	2:45 pm	266	1015	282	1068	548	2083
3:00 am	8	36	10	57	18	93	3:00 pm	260	1007	249	1056	509	2063
3:15 am	11	45	12	54	23	99	3:15 pm	273	991	261	1057	534	2048
3:30 am	9	44	18	55	27	99	3:30 pm	216	971	276	1034	492	2005
3:45 am	8	49	17	52	25	101	3:45 pm	258	1035	270	1048	528	2083
4:00 am	17	57	7	49	24	106	4:00 pm	244	1013	250	1078	494	2091
4:15 am	10	52	13	47	23	99	4:15 pm	253	1035	238	1088	491	2123
4:30 am	14	62	15	51	29	113	4:30 pm	280	1052	290	1067	570	2119
4:45 am	16	73	14	54	30	127	4:45 pm	236	1026	300	1022	536	2048
5:00 am	12	87	5	72	17	159	5:00 pm	266	1030	260	977	526	2007
5:15 am	20	102	17	89	37	191	5:15 pm	270	990	217	1007	487	1997
5:30 am	25	122	18	106	43	228	5:30 pm	254	989	245	1024	499	2013
5:45 am	30	127	32	120	62	247	5:45 pm	240	989	255	1023	495	2012
6:00 am	27	136	22	132	49	268	6:00 pm	226	1021	290	999	516	2020
6:15 am	40	173	34	149	74	322	6:15 pm	269	1025	234	935	503	1960
6:30 am	30	188	32	169	62	357	6:30 pm	254	960	244	884	498	1844
6:45 am	39	242	44	195	83	437	6:45 pm	272	916	231	834	503	1750
7:00 am	64	328	39	241	103	569	7:00 pm	230	846	226	786	456	1632
7:15 am	55	376	54	290	109	666	7:15 pm	204	806	183	770	387	1576
7:30 am	84	455	58	314	142	769	7:30 pm	210	798	194	751	404	1549
7:45 am	125	521	90	362	215	883	7:45 pm	202	730	183	735	385	1465
8:00 am	112	523	88	400	200	923	8:00 pm	190	693	210	738	400	1431
8:15 am	134	581	78	453	212	1034	8:15 pm	196	631	164	702	360	1333
8:30 am	150	652	106	503	256	1155	8:30 pm	142	569	178	698	320	1267
8:45 am	127	714	128	557	255	1271	8:45 pm	165	547	186	690	351	1237
9:00 am	170	813	141	612	311	1425	9:00 pm	128	516	174	656	302	1172
9:15 am	205	861	128	644	333	1505	9:15 pm	134	517	160	621	294	1138
9:30 am	212	866	160	729	372	1595	9:30 pm	120	499	170	596	290	1095
9:45 am	226	874	183	791	409	1665	9:45 pm	134	491	152	553	286	1044
10:00 am	218	870	173	832	391	1702	10:00 pm	129	465	139	505	268	970
10:15 am	210	892	213	865	423	1757	10:15 pm	116	425	135	466	251	891
10:30 am	220	900	222	902	442	1802	10:30 pm	112	394	127	435	239	829
10:45 am	222	911	224	920	446	1831	10:45 pm	108	364	104	408	212	772
11:00 am	240	913	206	956	446	1869	11:00 pm	89	330	100	384	189	714
11:15 am	218	909	250	1026	468	1935	11:15 pm	85		104		189	
11:30 am	231	940	240	1011	471	1951	11:30 pm	82		100		182	
11:45 am	224	949	260	1074	484	2023	11:45 pm	74		80		154	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	28519	11:45 am	2023	4:15 pm	2123
E/B	14109	11:45 am	949	2:30 pm	1054
W/B	14410	11:45 am	1074	1:30 pm	1161

Run Date: 08/25/2010
Run Time: 9:07 AM

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: Z93-Z96
Page: 1

Count Date: 08/15/2010 12:00 am Sunday   Condition: :   Location: ADMIRALTY WAY W/O PALAWAN WAY
Align Coord:

	E/B		W/B		Total			E/B		W/B		Total	
Time	15'	Hour	15'	Hour	15'	Hour	Time	15'	Hour	15'	Hour	15'	Hour
12:00 am	75	223	86	293	161	516	12:00 pm	214	873	230	935	444	1808
12:15 am	58	188	80	244	138	432	12:15 pm	226	895	215	957	441	1852
12:30 am	49	171	65	207	114	378	12:30 pm	199	889	252	988	451	1877
12:45 am	41	164	62	185	103	349	12:45 pm	234	892	238	1013	472	1905
1:00 am	40	158	37	176	77	334	1:00 pm	236	874	252	1043	488	1917
1:15 am	41	160	43	183	84	343	1:15 pm	220	881	246	1077	466	1958
1:30 am	42	134	43	173	85	307	1:30 pm	202	871	277	1115	479	1986
1:45 am	35	113	53	153	88	266	1:45 pm	216	911	268	1109	484	2020
2:00 am	42	99	44	127	86	226	2:00 pm	243	885	286	1117	529	2002
2:15 am	15	66	33	99	48	165	2:15 pm	210	838	284	1118	494	1956
2:30 am	21	58	23	82	44	140	2:30 pm	242	833	271	1090	513	1923
2:45 am	21	44	27	78	48	122	2:45 pm	190	831	276	1091	466	1922
3:00 am	9	33	16	68	25	101	3:00 pm	196	858	287	1087	483	1945
3:15 am	7	31	16	60	23	91	3:15 pm	205	886	256	1073	461	1959
3:30 am	7	32	19	57	26	89	3:30 pm	240	919	272	1063	512	1982
3:45 am	10	33	17	53	27	86	3:45 pm	217	887	272	1049	489	1936
4:00 am	7	36	8	46	15	82	4:00 pm	224	891	273	1056	497	1947
4:15 am	8	46	13	54	21	100	4:15 pm	238	921	246	1025	484	1946
4:30 am	8	49	15	52	23	101	4:30 pm	208	929	258	1033	466	1962
4:45 am	13	64	10	52	23	116	4:45 pm	221	977	279	1022	500	1999
5:00 am	17	68	16	63	33	131	5:00 pm	254	987	242	990	496	1977
5:15 am	11	81	11	59	22	140	5:15 pm	246	984	254	964	500	1948
5:30 am	23	95	15	69	38	164	5:30 pm	256	1042	247	964	503	2006
5:45 am	17	102	21	78	38	180	5:45 pm	231	1092	247	933	478	2025
6:00 am	30	134	12	92	42	226	6:00 pm	251	1095	216	906	467	2001
6:15 am	25	144	21	116	46	260	6:15 pm	304	1098	254	900	558	1998
6:30 am	30	165	24	138	54	303	6:30 pm	306	992	216	852	522	1844
6:45 am	49	196	35	161	84	357	6:45 pm	234	888	220	856	454	1744
7:00 am	40	225	36	176	76	401	7:00 pm	254	847	210	848	464	1695
7:15 am	46	254	43	196	89	450	7:15 pm	198	795	206	844	404	1639
7:30 am	61	302	47	213	108	515	7:30 pm	202	767	220	834	422	1601
7:45 am	78	347	50	227	128	574	7:45 pm	193	719	212	783	405	1502
8:00 am	69	373	56	277	125	650	8:00 pm	202	705	206	753	408	1458
8:15 am	94	436	60	311	154	747	8:15 pm	170	640	196	715	366	1355
8:30 am	106	484	61	340	167	824	8:30 pm	154	611	169	668	323	1279
8:45 am	104	520	100	391	204	911	8:45 pm	179	563	182	637	361	1200
9:00 am	132	584	90	449	222	1033	9:00 pm	137	474	168	596	305	1070
9:15 am	142	620	89	511	231	1131	9:15 pm	141	433	149	547	290	980
9:30 am	142	660	112	580	254	1240	9:30 pm	106	374	138	500	244	874
9:45 am	168	711	158	637	326	1348	9:45 pm	90	338	141	457	231	795
10:00 am	168	751	152	693	320	1444	10:00 pm	96	306	119	402	215	708
10:15 am	182	769	158	719	340	1488	10:15 pm	82	295	102	355	184	650
10:30 am	193	797	169	763	362	1560	10:30 pm	70	269	95	316	165	585
10:45 am	208	817	214	820	422	1637	10:45 pm	58	249	86	268	144	517
11:00 am	186	835	178	848	364	1683	11:00 pm	85	236	72	232	157	468
11:15 am	210	863	202	900	412	1763	11:15 pm	56		63		119	
11:30 am	213	879	226	913	439	1792	11:30 pm	50		47		97	
11:45 am	226	865	242	939	468	1804	11:45 pm	45		50		95	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	25823	11:45 am	1804	5:45 pm	2025
E/B	12550	11:30 am	879	6:15 pm	1098
W/B	13273	11:45 am	939	2:15 pm	1118

Run Date: *08/25/2010*

Run Time: *9:07 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: Z97-1A0

Page: 1

Count Date: 08/14/2010 12:00 am Saturday   Condition: :   Location: BALI WAY E/O ADMIRALTY WAY

Align Coord:

Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour	Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour
12:00 am	26	104	34	107	60	211	12:00 pm	98	348	126	457	224	805
12:15 am	29	97	24	89	53	186	12:15 pm	68	340	108	432	176	772
12:30 am	22	98	28	83	50	181	12:30 pm	98	354	115	425	213	779
12:45 am	27	103	21	73	48	176	12:45 pm	84	349	108	422	192	771
1:00 am	19	106	16	66	35	172	1:00 pm	90	348	101	412	191	760
1:15 am	30	127	18	64	48	191	1:15 pm	82	338	101	411	183	749
1:30 am	27	144	18	57	45	201	1:30 pm	93	338	112	429	205	767
1:45 am	30	135	14	45	44	180	1:45 pm	83	339	98	405	181	744
2:00 am	40	111	14	40	54	151	2:00 pm	80	350	100	413	180	763
2:15 am	47	79	11	32	58	111	2:15 pm	82	376	119	416	201	792
2:30 am	18	35	6	24	24	59	2:30 pm	94	383	88	385	182	768
2:45 am	6	22	9	26	15	48	2:45 pm	94	386	106	423	200	809
3:00 am	8	19	6	27	14	46	3:00 pm	106	381	103	414	209	795
3:15 am	3	16	3	25	6	41	3:15 pm	89	375	88	414	177	789
3:30 am	5	21	8	25	13	46	3:30 pm	97	386	126	407	223	793
3:45 am	3	19	10	23	13	42	3:45 pm	89	371	97	387	186	758
4:00 am	5	18	4	21	9	39	4:00 pm	100	366	103	400	203	766
4:15 am	8	16	3	22	11	38	4:15 pm	100	372	81	395	181	767
4:30 am	3	13	6	26	9	39	4:30 pm	82	366	106	406	188	772
4:45 am	2	14	8	32	10	46	4:45 pm	84	352	110	396	194	748
5:00 am	3	23	5	37	8	60	5:00 pm	106	352	98	384	204	736
5:15 am	5	29	7	44	12	73	5:15 pm	94	342	92	383	186	725
5:30 am	4	41	12	50	16	91	5:30 pm	68	329	96	381	164	710
5:45 am	11	48	13	56	24	104	5:45 pm	84	339	98	393	182	732
6:00 am	9	45	12	67	21	112	6:00 pm	96	337	97	401	193	738
6:15 am	17	51	13	81	30	132	6:15 pm	81	309	90	386	171	695
6:30 am	11	59	18	96	29	155	6:30 pm	78	297	108	374	186	671
6:45 am	8	68	24	106	32	174	6:45 pm	82	283	106	330	188	613
7:00 am	15	88	26	130	41	218	7:00 pm	68	261	82	304	150	565
7:15 am	25	93	28	146	53	239	7:15 pm	69	269	78	280	147	549
7:30 am	20	117	28	166	48	283	7:30 pm	64	262	64	271	128	533
7:45 am	28	139	48	194	76	333	7:45 pm	60	260	80	269	140	529
8:00 am	20	162	42	194	62	356	8:00 pm	76	266	58	253	134	519
8:15 am	49	187	48	218	97	405	8:15 pm	62	254	69	259	131	513
8:30 am	42	198	56	208	98	406	8:30 pm	62	250	62	245	124	495
8:45 am	51	227	48	232	99	459	8:45 pm	66	244	64	233	130	477
9:00 am	45	240	66	265	111	505	9:00 pm	64	228	64	239	128	467
9:15 am	60	262	38	253	98	515	9:15 pm	58	222	55	227	113	449
9:30 am	71	266	80	277	151	543	9:30 pm	56	222	50	214	106	436
9:45 am	64	269	81	283	145	552	9:45 pm	50	218	70	214	120	432
10:00 am	67	287	54	294	121	581	10:00 pm	58	229	52	196	110	425
10:15 am	64	302	62	322	126	624	10:15 pm	58	225	42	178	100	403
10:30 am	74	323	86	362	160	685	10:30 pm	52	214	50	178	102	392
10:45 am	82	337	92	376	174	713	10:45 pm	61	196	52	176	113	372
11:00 am	82	335	82	399	164	734	11:00 pm	54	171	34	151	88	322
11:15 am	85	351	102	443	187	794	11:15 pm	47		42		89	
11:30 am	88	334	100	449	188	783	11:30 pm	34		48		82	
11:45 am	80	344	115	464	195	808	11:45 pm	36		27		63	

24 Hour Direction	Volume	AM Peak Hour Time	Volume	PM Peak Hour Time	Volume
Total	10846	11:45 am	808	2:45 pm	809
E/B	5175	11:15 am	351	2:45 pm	386
W/B	5671	11:45 am	464	12:00 pm	457

Run Date: *08/25/2010*

Run Time: *9:07 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: Z97-1A0
Page: 1

Count Date: 08/15/2010 12:00 am Sunday Condition: : Location: BALI WAY E/O ADMIRALTY WAY

Align Coord:

Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour	Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour
12:00 am	29	118	33	113	62	231	12:00 pm	68	288	92	424	160	712
12:15 am	32	108	29	96	61	204	12:15 pm	72	285	88	426	160	711
12:30 am	31	98	28	88	59	186	12:30 pm	68	302	116	420	184	722
12:45 am	26	91	23	78	49	169	12:45 pm	80	296	128	396	208	692
1:00 am	19	92	16	74	35	166	1:00 pm	65	294	94	375	159	669
1:15 am	22	97	21	78	43	175	1:15 pm	89	311	82	395	171	706
1:30 am	24	86	18	67	42	153	1:30 pm	62	304	92	415	154	719
1:45 am	27	70	19	59	46	129	1:45 pm	78	318	107	437	185	755
2:00 am	24	50	20	51	44	101	2:00 pm	82	322	114	434	196	756
2:15 am	11	34	10	34	21	68	2:15 pm	82	318	102	426	184	744
2:30 am	8	27	10	32	18	59	2:30 pm	76	318	114	418	190	736
2:45 am	7	21	11	28	18	49	2:45 pm	82	328	104	402	186	730
3:00 am	8	17	3	22	11	39	3:00 pm	78	332	106	394	184	726
3:15 am	4	17	8	23	12	40	3:15 pm	82	332	94	380	176	712
3:30 am	2	16	6	18	8	34	3:30 pm	86	327	98	388	184	715
3:45 am	3	18	5	16	8	34	3:45 pm	86	323	96	381	182	704
4:00 am	8	21	4	15	12	36	4:00 pm	78	321	92	393	170	714
4:15 am	3	19	3	23	6	42	4:15 pm	77	333	102	372	179	705
4:30 am	4	19	4	26	8	45	4:30 pm	82	331	91	339	173	670
4:45 am	6	19	4	30	10	49	4:45 pm	84	347	108	327	192	674
5:00 am	6	20	12	37	18	57	5:00 pm	90	347	71	297	161	644
5:15 am	3	15	6	30	9	45	5:15 pm	75	355	69	298	144	653
5:30 am	4	21	8	35	12	56	5:30 pm	98	364	79	315	177	679
5:45 am	7	28	11	41	18	69	5:45 pm	84	356	78	305	162	661
6:00 am	1	28	5	54	6	82	6:00 pm	98	366	72	291	170	657
6:15 am	9	37	11	72	20	109	6:15 pm	84	350	86	301	170	651
6:30 am	11	46	14	85	25	131	6:30 pm	90	340	69	286	159	626
6:45 am	7	55	24	93	31	148	6:45 pm	94	322	64	290	158	612
7:00 am	10	66	23	95	33	161	7:00 pm	82	295	82	284	164	579
7:15 am	18	76	24	108	42	184	7:15 pm	74	269	71	268	145	537
7:30 am	20	96	22	114	42	210	7:30 pm	72	265	73	245	145	510
7:45 am	18	100	26	126	44	226	7:45 pm	67	253	58	226	125	479
8:00 am	20	123	36	150	56	273	8:00 pm	56	246	66	232	122	478
8:15 am	38	135	30	144	68	279	8:15 pm	70	229	48	220	118	449
8:30 am	24	141	34	155	58	296	8:30 pm	60	205	54	216	114	421
8:45 am	41	161	50	161	91	322	8:45 pm	60	189	64	216	124	405
9:00 am	32	178	30	181	62	359	9:00 pm	39	180	54	200	93	380
9:15 am	44	204	41	209	85	413	9:15 pm	46	170	44	187	90	357
9:30 am	44	220	40	233	84	453	9:30 pm	44	154	54	175	98	329
9:45 am	58	240	70	259	128	499	9:45 pm	51	140	48	145	99	285
10:00 am	58	239	58	266	116	505	10:00 pm	29	108	41	142	70	250
10:15 am	60	249	65	299	125	548	10:15 pm	30	97	32	132	62	229
10:30 am	64	257	66	305	130	562	10:30 pm	30	91	24	118	54	209
10:45 am	57	269	77	335	134	604	10:45 pm	19	84	45	124	64	208
11:00 am	68	290	91	354	159	644	11:00 pm	18	77	31	101	49	178
11:15 am	68	290	71	355	139	645	11:15 pm	24		18		42	
11:30 am	76	294	96	372	172	666	11:30 pm	23		30		53	
11:45 am	78	286	96	392	174	678	11:45 pm	12		22		34	

24 Hour Direction	24 Hour Volume	AM Peak Hour Time	AM Peak Hour Volume	PM Peak Hour Time	PM Peak Hour Volume
Total	9397	11:45 am	678	2:00 pm	756
E/B	4418	11:30 am	294	6:00 pm	366
W/B	4979	11:45 am	392	1:45 pm	437

Run Date: *08/25/2010*

Run Time: *9:06 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: Y37-Y42

Page: 1

Count Date: 07/31/2010 12:00 am Saturday   Condition: :   Location: ADMIRALTY WAY W/O BALI WAY

Align Coord:

Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour	Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour
12:00 am	86	261	84	309	170	570	12:00 pm	312	1209	270	1278	582	2487
12:15 am	62	244	84	283	146	527	12:15 pm	300	1179	344	1323	644	2502
12:30 am	60	232	88	245	148	477	12:30 pm	297	1192	326	1315	623	2507
12:45 am	53	226	53	207	106	433	12:45 pm	300	1201	338	1354	638	2555
1:00 am	69	250	58	197	127	447	1:00 pm	282	1157	315	1362	597	2519
1:15 am	50	251	46	171	96	422	1:15 pm	313	1183	336	1388	649	2571
1:30 am	54	246	50	160	104	406	1:30 pm	306	1175	365	1380	671	2555
1:45 am	77	218	43	144	120	362	1:45 pm	256	1166	346	1363	602	2529
2:00 am	70	157	32	126	102	283	2:00 pm	308	1230	341	1393	649	2623
2:15 am	45	103	35	118	80	221	2:15 pm	305	1221	328	1381	633	2602
2:30 am	26	78	34	99	60	177	2:30 pm	297	1222	348	1375	645	2597
2:45 am	16	69	25	81	41	150	2:45 pm	320	1205	376	1337	696	2542
3:00 am	16	72	24	66	40	138	3:00 pm	299	1209	329	1298	628	2507
3:15 am	20	67	16	65	36	132	3:15 pm	306	1258	322	1280	628	2538
3:30 am	17	61	16	63	33	124	3:30 pm	280	1272	310	1254	590	2526
3:45 am	19	58	10	62	29	120	3:45 pm	324	1308	337	1265	661	2573
4:00 am	11	51	23	68	34	119	4:00 pm	348	1326	311	1246	659	2572
4:15 am	14	59	14	56	28	115	4:15 pm	320	1336	296	1227	616	2563
4:30 am	14	64	15	60	29	124	4:30 pm	316	1376	321	1237	637	2613
4:45 am	12	79	16	73	28	152	4:45 pm	342	1403	318	1246	660	2649
5:00 am	19	95	11	103	30	198	5:00 pm	358	1376	292	1238	650	2614
5:15 am	19	112	18	119	37	231	5:15 pm	360	1328	306	1266	666	2594
5:30 am	29	145	28	139	57	284	5:30 pm	343	1312	330	1255	673	2567
5:45 am	28	164	46	161	74	325	5:45 pm	315	1255	310	1251	625	2506
6:00 am	36	181	27	203	63	384	6:00 pm	310	1236	320	1221	630	2457
6:15 am	52	216	38	254	90	470	6:15 pm	344	1190	295	1183	639	2373
6:30 am	48	248	50	306	98	554	6:30 pm	286	1094	326	1148	612	2242
6:45 am	45	318	88	364	133	682	6:45 pm	296	1058	280	1082	576	2140
7:00 am	71	399	78	400	149	799	7:00 pm	264	995	282	1063	546	2058
7:15 am	84	477	90	435	174	912	7:15 pm	248	936	260	1005	508	1941
7:30 am	118	547	108	442	226	989	7:30 pm	250	884	260	949	510	1833
7:45 am	126	587	124	458	250	1045	7:45 pm	233	794	261	918	494	1712
8:00 am	149	611	113	477	262	1088	8:00 pm	205	749	224	893	429	1642
8:15 am	154	650	97	511	251	1161	8:15 pm	196	706	204	899	400	1605
8:30 am	158	707	124	606	282	1313	8:30 pm	160	681	229	859	389	1540
8:45 am	150	804	143	698	293	1502	8:45 pm	188	665	236	808	424	1473
9:00 am	188	878	147	765	335	1643	9:00 pm	162	629	230	727	392	1356
9:15 am	211	918	192	826	403	1744	9:15 pm	171	626	164	685	335	1311
9:30 am	255	970	216	826	471	1796	9:30 pm	144	637	178	710	322	1347
9:45 am	224	1018	210	864	434	1882	9:45 pm	152	655	155	696	307	1351
10:00 am	228	1082	208	886	436	1968	10:00 pm	159	649	188	689	347	1338
10:15 am	263	1178	192	932	455	2110	10:15 pm	182	641	189	659	371	1300
10:30 am	303	1175	254	1024	557	2199	10:30 pm	162	631	164	608	326	1239
10:45 am	288	1174	232	1083	520	2257	10:45 pm	146	637	148	546	294	1183
11:00 am	324	1198	254	1131	578	2329	11:00 pm	151	622	158	510	309	1132
11:15 am	260	1186	284	1147	544	2333	11:15 pm	172		138		310	
11:30 am	302	1226	313	1207	615	2433	11:30 pm	168		102		270	
11:45 am	312	1221	280	1220	592	2441	11:45 pm	131		112		243	

24 Hour Direction	Volume	AM Peak Hour Time	Volume	PM Peak Hour Time	Volume
Total	35271	11:45 am	2441	4:45 pm	2649
E/B	17622	11:30 am	1226	4:45 pm	1403
W/B	17649	11:45 am	1220	2:00 pm	1393

Run Date: *08/25/2010*

Run Time: *9:06 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: Y37-Y42

Page: 1

Count Date: 08/01/2010 12:00 am Sunday   Condition: :   Location: ADMIRALTY WAY W/O BALI WAY

Align Coord:

	E/B		W/B		Total			E/B		W/B		Total	
Time	15'	Hour	15'	Hour	15'	Hour	Time	15'	Hour	15'	Hour	15'	Hour
12:00 am	76	282	90	306	166	588	12:00 pm	234	1023	282	1208	516	2231
12:15 am	84	272	70	270	154	542	12:15 pm	255	1091	290	1258	545	2349
12:30 am	62	222	88	258	150	480	12:30 pm	262	1117	315	1310	577	2427
12:45 am	60	216	58	210	118	426	12:45 pm	272	1113	321	1339	593	2452
1:00 am	66	220	54	193	120	413	1:00 pm	302	1119	332	1358	634	2477
1:15 am	34	212	58	189	92	401	1:15 pm	281	1099	342	1334	623	2433
1:30 am	56	214	40	167	96	381	1:30 pm	258	1102	344	1350	602	2452
1:45 am	64	189	41	155	105	344	1:45 pm	278	1147	340	1341	618	2488
2:00 am	58	146	50	141	108	287	2:00 pm	282	1168	308	1363	590	2531
2:15 am	36	103	36	113	72	216	2:15 pm	284	1156	358	1410	642	2566
2:30 am	31	83	28	98	59	181	2:30 pm	303	1115	335	1384	638	2499
2:45 am	21	65	27	90	48	155	2:45 pm	299	1123	362	1389	661	2512
3:00 am	15	55	22	85	37	140	3:00 pm	270	1142	355	1355	625	2497
3:15 am	16	55	21	76	37	131	3:15 pm	243	1183	332	1322	575	2505
3:30 am	13	52	20	71	33	123	3:30 pm	311	1258	340	1281	651	2539
3:45 am	11	59	22	65	33	124	3:45 pm	318	1273	328	1219	646	2492
4:00 am	15	61	13	67	28	128	4:00 pm	311	1293	322	1204	633	2497
4:15 am	13	61	16	77	29	138	4:15 pm	318	1296	291	1162	609	2458
4:30 am	20	72	14	79	34	151	4:30 pm	326	1359	278	1121	604	2480
4:45 am	13	72	24	92	37	164	4:45 pm	338	1335	313	1139	651	2474
5:00 am	15	88	23	105	38	193	5:00 pm	314	1315	280	1132	594	2447
5:15 am	24	104	18	123	42	227	5:15 pm	381	1325	250	1168	631	2493
5:30 am	20	126	27	141	47	267	5:30 pm	302	1220	296	1206	598	2426
5:45 am	29	142	37	159	66	301	5:45 pm	318	1185	306	1184	624	2369
6:00 am	31	171	41	180	72	351	6:00 pm	324	1150	316	1134	640	2284
6:15 am	46	200	36	207	82	407	6:15 pm	276	1084	288	1085	564	2169
6:30 am	36	226	45	229	81	455	6:30 pm	267	1033	274	1012	541	2045
6:45 am	58	266	58	258	116	524	6:45 pm	283	1000	256	986	539	1986
7:00 am	60	296	68	299	128	595	7:00 pm	258	973	267	958	525	1931
7:15 am	72	336	58	305	130	641	7:15 pm	225	982	215	885	440	1867
7:30 am	76	394	74	349	150	743	7:30 pm	234	1011	248	850	482	1861
7:45 am	88	442	99	388	187	830	7:45 pm	256	983	228	800	484	1783
8:00 am	100	494	74	429	174	923	8:00 pm	267	933	194	770	461	1703
8:15 am	130	532	102	481	232	1013	8:15 pm	254	860	180	772	434	1632
8:30 am	124	540	113	525	237	1065	8:30 pm	206	776	198	755	404	1531
8:45 am	140	606	140	571	280	1177	8:45 pm	206	716	198	711	404	1427
9:00 am	138	650	126	625	264	1275	9:00 pm	194	620	196	679	390	1299
9:15 am	138	717	146	693	284	1410	9:15 pm	170	580	163	638	333	1218
9:30 am	190	795	159	748	349	1543	9:30 pm	146	553	154	583	300	1136
9:45 am	184	830	194	804	378	1634	9:45 pm	110	529	166	555	276	1084
10:00 am	205	901	194	884	399	1785	10:00 pm	154	518	155	481	309	999
10:15 am	216	916	201	923	417	1839	10:15 pm	143	460	108	424	251	884
10:30 am	225	922	215	973	440	1895	10:30 pm	122	397	126	395	248	792
10:45 am	255	947	274	1070	529	2017	10:45 pm	99	332	92	323	191	655
11:00 am	220	930	233	1082	453	2012	11:00 pm	96	297	98	276	194	573
11:15 am	222	944	251	1131	473	2075	11:15 pm	80		79		159	
11:30 am	250	977	312	1170	562	2147	11:30 pm	57		54		111	
11:45 am	238	989	286	1173	524	2162	11:45 pm	64		45		109	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	32159	11:45 am	2162	2:15 pm	2566
E/B	15845	11:45 am	989	4:30 pm	1359
W/B	16314	11:45 am	1173	2:15 pm	1410

Run Date: *08/25/2010*
Run Time: *9:08 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1A1-1A4
Page: 1

Count Date: 08/14/2010 12:00 am Saturday   Condition: :   Location: BALI WAY W/O ADMIRALTY WAY
Align Coord:

Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour	Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour
12:00 am	2	9	0	4	2	13	12:00 pm	22	97	34	127	56	224
12:15 am	5	8	2	7	7	15	12:15 pm	22	101	44	124	66	225
12:30 am	1	3	0	8	1	11	12:30 pm	31	97	20	99	51	196
12:45 am	1	5	2	10	3	15	12:45 pm	22	90	29	107	51	197
1:00 am	1	4	3	8	4	12	1:00 pm	26	85	31	112	57	197
1:15 am	0	9	3	10	3	19	1:15 pm	18	87	19	108	37	195
1:30 am	3	11	2	11	5	22	1:30 pm	24	95	28	119	52	214
1:45 am	0	9	0	9	0	18	1:45 pm	17	97	34	111	51	208
2:00 am	6	9	5	9	11	18	2:00 pm	28	105	27	107	55	212
2:15 am	2	4	4	4	6	8	2:15 pm	26	111	30	114	56	225
2:30 am	1	2	0	0	1	2	2:30 pm	26	108	20	103	46	211
2:45 am	0	1	0	0	0	1	2:45 pm	25	114	30	101	55	215
3:00 am	1	1	0	2	1	3	3:00 pm	34	118	34	96	68	214
3:15 am	0	2	0	2	0	4	3:15 pm	23	119	19	86	42	205
3:30 am	0	3	0	2	0	5	3:30 pm	32	132	18	93	50	225
3:45 am	0	4	2	2	2	6	3:45 pm	29	141	25	106	54	247
4:00 am	2	6	0	4	2	10	4:00 pm	35	140	24	97	59	237
4:15 am	1	7	0	5	1	12	4:15 pm	36	147	26	94	62	241
4:30 am	1	6	0	7	1	13	4:30 pm	41	137	31	84	72	221
4:45 am	2	8	4	10	6	18	4:45 pm	28	118	16	66	44	184
5:00 am	3	6	1	6	4	12	5:00 pm	42	107	21	67	63	174
5:15 am	0	5	2	8	2	13	5:15 pm	26	93	16	78	42	171
5:30 am	3	7	3	10	6	17	5:30 pm	22	97	13	90	35	187
5:45 am	0	7	0	12	0	19	5:45 pm	17	97	17	109	34	206
6:00 am	2	11	3	15	5	26	6:00 pm	28	107	32	115	60	222
6:15 am	2	15	4	20	6	35	6:15 pm	30	95	28	101	58	196
6:30 am	3	17	5	25	8	42	6:30 pm	22	85	32	87	54	172
6:45 am	4	24	3	31	7	55	6:45 pm	27	86	23	61	50	147
7:00 am	6	30	8	39	14	69	7:00 pm	16	72	18	54	34	126
7:15 am	4	30	9	41	13	71	7:15 pm	20	71	14	52	34	123
7:30 am	10	42	11	50	21	92	7:30 pm	23	62	6	47	29	109
7:45 am	10	52	11	52	21	104	7:45 pm	13	57	16	62	29	119
8:00 am	6	56	10	61	16	117	8:00 pm	15	57	16	55	31	112
8:15 am	16	70	18	77	34	147	8:15 pm	11	51	9	50	20	101
8:30 am	20	72	13	73	33	145	8:30 pm	18	54	21	51	39	105
8:45 am	14	72	20	94	34	166	8:45 pm	13	45	9	37	22	82
9:00 am	20	76	26	92	46	168	9:00 pm	9	41	11	39	20	80
9:15 am	18	76	14	84	32	160	9:15 pm	14	59	10	47	24	106
9:30 am	20	80	34	90	54	170	9:30 pm	9	57	7	52	16	109
9:45 am	18	82	18	78	36	160	9:45 pm	9	58	11	54	20	112
10:00 am	20	90	18	90	38	180	10:00 pm	27	63	19	55	46	118
10:15 am	22	98	20	91	42	189	10:15 pm	12	54	15	58	27	112
10:30 am	22	98	22	90	44	188	10:30 pm	10	54	9	53	19	107
10:45 am	26	104	30	90	56	194	10:45 pm	14	54	12	52	26	106
11:00 am	28	104	19	88	47	192	11:00 pm	18	50	22	45	40	95
11:15 am	22	98	19	103	41	201	11:15 pm	12		10		22	
11:30 am	28	98	22	128	50	226	11:30 pm	10		8		18	
11:45 am	26	101	28	126	54	227	11:45 pm	10		5		15	

24 Hour Direction	24 Hour Volume	AM Peak Hour Time	AM Peak Hour Volume	PM Peak Hour Time	PM Peak Hour Volume
Total	2831	11:45 am	227	3:45 pm	247
E/B	1444	10:45 am	104	4:15 pm	147
W/B	1387	11:30 am	128	12:00 pm	127

Run Date: *08/25/2010*

Run Time: *9:08 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1A1-1A4

Page: 1

Count Date: 08/15/2010 12:00 am Sunday   Condition: :   Location: BALI WAY W/O ADMIRALTY WAY

Align Coord:

	E/B		W/B		Total			E/B		W/B		Total	
Time	15'	Hour	15'	Hour	15'	Hour	Time	15'	Hour	15'	Hour	15'	Hour
12:00 am	5	20	9	14	14	34	12:00 pm	7	71	20	94	27	165
12:15 am	2	17	3	7	5	24	12:15 pm	18	85	26	91	44	176
12:30 am	10	15	1	5	11	20	12:30 pm	22	93	26	87	48	180
12:45 am	3	6	1	6	4	12	12:45 pm	24	89	22	75	46	164
1:00 am	2	6	2	7	4	13	1:00 pm	21	87	17	72	38	159
1:15 am	0	5	1	7	1	12	1:15 pm	26	78	22	69	48	147
1:30 am	1	6	2	7	3	13	1:30 pm	18	90	14	73	32	163
1:45 am	3	8	2	6	5	14	1:45 pm	22	100	19	78	41	178
2:00 am	1	5	2	5	3	10	2:00 pm	12	105	14	81	26	186
2:15 am	1	4	1	3	2	7	2:15 pm	38	117	26	97	64	214
2:30 am	3	3	1	2	4	5	2:30 pm	28	101	19	92	47	193
2:45 am	0	2	1	1	1	3	2:45 pm	27	88	22	93	49	181
3:00 am	0	2	0	0	0	2	3:00 pm	24	89	30	90	54	179
3:15 am	0	3	0	0	0	3	3:15 pm	22	95	21	75	43	170
3:30 am	2	5	0	1	2	6	3:30 pm	15	89	20	75	35	164
3:45 am	0	3	0	2	0	5	3:45 pm	28	92	19	65	47	157
4:00 am	1	6	0	2	1	8	4:00 pm	30	90	15	68	45	158
4:15 am	2	6	1	5	3	11	4:15 pm	16	89	21	70	37	159
4:30 am	0	4	1	4	1	8	4:30 pm	18	92	10	58	28	150
4:45 am	3	4	0	4	3	8	4:45 pm	26	86	22	58	48	144
5:00 am	1	3	3	5	4	8	5:00 pm	29	84	17	52	46	136
5:15 am	0	4	0	3	0	7	5:15 pm	19	79	9	52	28	131
5:30 am	0	10	1	9	1	19	5:30 pm	12	84	10	64	22	148
5:45 am	2	13	1	10	3	23	5:45 pm	24	95	16	66	40	161
6:00 am	2	14	1	14	3	28	6:00 pm	24	93	17	67	41	160
6:15 am	6	17	6	19	12	36	6:15 pm	24	86	21	66	45	152
6:30 am	3	15	2	15	5	30	6:30 pm	23	76	12	63	35	139
6:45 am	3	20	5	15	8	35	6:45 pm	22	82	17	69	39	151
7:00 am	5	25	6	22	11	47	7:00 pm	17	83	16	70	33	153
7:15 am	4	30	2	29	6	59	7:15 pm	14	80	18	67	32	147
7:30 am	8	38	2	35	10	73	7:30 pm	29	81	18	58	47	139
7:45 am	8	40	12	43	20	83	7:45 pm	23	64	18	53	41	117
8:00 am	10	44	13	43	23	87	8:00 pm	14	51	13	47	27	98
8:15 am	12	48	8	40	20	88	8:15 pm	15	43	9	41	24	84
8:30 am	10	52	10	50	20	102	8:30 pm	12	32	13	42	25	74
8:45 am	12	59	12	60	24	119	8:45 pm	10	30	12	43	22	73
9:00 am	14	67	10	64	24	131	9:00 pm	6	29	7	46	13	75
9:15 am	16	71	18	71	34	142	9:15 pm	4	29	10	44	14	73
9:30 am	17	79	20	73	37	152	9:30 pm	10	27	14	39	24	66
9:45 am	20	75	16	72	36	147	9:45 pm	9	18	15	30	24	48
10:00 am	18	69	17	75	35	144	10:00 pm	6	11	5	22	11	33
10:15 am	24	75	20	80	44	155	10:15 pm	2	11	5	22	7	33
10:30 am	13	74	19	78	32	152	10:30 pm	1	11	5	20	6	31
10:45 am	14	84	19	74	33	158	10:45 pm	2	12	7	17	9	29
11:00 am	24	98	22	86	46	184	11:00 pm	6	11	5	13	11	24
11:15 am	23	81	18	84	41	165	11:15 pm	2		3		5	
11:30 am	23	76	15	92	38	168	11:30 pm	2		2		4	
11:45 am	28	75	31	103	59	178	11:45 pm	1		3		4	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	2222	11:00 am	184	2:15 pm	214
E/B	1163	11:00 am	98	2:15 pm	117
W/B	1059	11:45 am	103	2:15 pm	97

Run Date: *08/25/2010*

Run Time: *9:16 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1B3-1B6

Page: 1

Count Date: 08/14/2010 12:00 am Saturday   Condition: :   Location: MARQUESAS WAY E/O VIA MARINA

Align Coord:

	E/B		W/B		Total			E/B		W/B		Total	
Time	15'	Hour	15'	Hour	15'	Hour	Time	15'	Hour	15'	Hour	15'	Hour
12:00 am	8	38	9	28	17	66	12:00 pm	30	154	42	169	72	323
12:15 am	10	35	6	22	16	57	12:15 pm	29	161	32	157	61	318
12:30 am	9	31	8	17	17	48	12:30 pm	49	168	59	159	108	327
12:45 am	11	31	5	12	16	43	12:45 pm	46	152	36	138	82	290
1:00 am	5	25	3	11	8	36	1:00 pm	37	149	30	130	67	279
1:15 am	6	26	1	10	7	36	1:15 pm	36	155	34	138	70	293
1:30 am	9	24	3	11	12	35	1:30 pm	33	166	38	146	71	312
1:45 am	5	21	4	9	9	30	1:45 pm	43	170	28	143	71	313
2:00 am	6	20	2	7	8	27	2:00 pm	43	170	38	153	81	323
2:15 am	4	17	2	7	6	24	2:15 pm	47	155	42	156	89	311
2:30 am	6	15	1	8	7	23	2:30 pm	37	143	35	150	72	293
2:45 am	4	17	2	9	6	26	2:45 pm	43	136	38	146	81	282
3:00 am	3	16	2	7	5	23	3:00 pm	28	121	41	142	69	263
3:15 am	2	15	3	7	5	22	3:15 pm	35	128	36	139	71	267
3:30 am	8	16	2	5	10	21	3:30 pm	30	131	31	141	61	272
3:45 am	3	9	0	6	3	15	3:45 pm	28	139	34	140	62	279
4:00 am	2	7	2	6	4	13	4:00 pm	35	150	38	137	73	287
4:15 am	3	6	1	8	4	14	4:15 pm	38	154	38	139	76	293
4:30 am	1	6	3	11	4	17	4:30 pm	38	144	30	140	68	284
4:45 am	1	8	0	10	1	18	4:45 pm	39	141	31	157	70	298
5:00 am	1	12	4	14	5	26	5:00 pm	39	130	40	158	79	288
5:15 am	3	15	4	14	7	29	5:15 pm	28	125	39	158	67	283
5:30 am	3	18	2	20	5	38	5:30 pm	35	121	47	161	82	282
5:45 am	5	19	4	25	9	44	5:45 pm	28	111	32	142	60	253
6:00 am	4	17	4	35	8	52	6:00 pm	34	113	40	149	74	262
6:15 am	6	17	10	41	16	58	6:15 pm	24	111	42	137	66	248
6:30 am	4	18	7	41	11	59	6:30 pm	25	117	28	112	53	229
6:45 am	3	23	14	48	17	71	6:45 pm	30	112	39	113	69	225
7:00 am	4	36	10	64	14	100	7:00 pm	32	114	28	93	60	207
7:15 am	7	51	10	77	17	128	7:15 pm	30	106	17	89	47	195
7:30 am	9	56	14	89	23	145	7:30 pm	20	98	29	92	49	190
7:45 am	16	56	30	100	46	156	7:45 pm	32	100	19	82	51	182
8:00 am	19	62	23	99	42	161	8:00 pm	24	89	24	92	48	181
8:15 am	12	65	22	104	34	169	8:15 pm	22	94	20	88	42	182
8:30 am	9	69	25	112	34	181	8:30 pm	22	94	19	87	41	181
8:45 am	22	82	29	133	51	215	8:45 pm	21	91	29	81	50	172
9:00 am	22	82	28	138	50	220	9:00 pm	29	89	20	67	49	156
9:15 am	16	85	30	148	46	233	9:15 pm	22	80	19	62	41	142
9:30 am	22	94	46	158	68	252	9:30 pm	19	79	13	52	32	131
9:45 am	22	120	34	160	56	280	9:45 pm	19	75	15	54	34	129
10:00 am	25	140	38	157	63	297	10:00 pm	20	77	15	60	35	137
10:15 am	25	149	40	149	65	298	10:15 pm	21	73	9	54	30	127
10:30 am	48	161	48	149	96	310	10:30 pm	15	64	15	56	30	120
10:45 am	42	144	31	143	73	287	10:45 pm	21	59	21	47	42	106
11:00 am	34	142	30	135	64	277	11:00 pm	16	52	9	38	25	90
11:15 am	37	138	40	147	77	285	11:15 pm	12		11		23	
11:30 am	31	130	42	139	73	269	11:30 pm	10		6		16	
11:45 am	40	148	23	156	63	304	11:45 pm	14		12		26	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	4094	10:30 am	310	12:30 pm	327
E/B	2005	10:30 am	161	1:45 pm	170
W/B	2089	9:45 am	160	12:00 pm	169

Run Date: *08/25/2010* | Los Angeles County Department of Public Works | Report ID: 1B3-1B6

Run Time: *9:16 AM* | 900 S. Fremont Ave. | Page: 1

Machine Traffic Count

Count Date: 08/15/2010 12:00 am Sunday   Condition: :   Location: MARQUESAS WAY E/O VIA MARINA

Align Coord:

	E/B		W/B		Total			E/B		W/B		Total	
Time	15'	Hour	15'	Hour	15'	Hour	Time	15'	Hour	15'	Hour	15'	Hour
12:00 am	15	53	10	22	25	75	12:00 pm	26	122	33	137	59	259
12:15 am	15	48	8	15	23	63	12:15 pm	29	127	31	134	60	261
12:30 am	13	39	3	10	16	49	12:30 pm	24	125	36	133	60	258
12:45 am	10	34	1	15	11	49	12:45 pm	43	139	37	140	80	279
1:00 am	10	31	3	19	13	50	1:00 pm	31	127	30	137	61	264
1:15 am	6	28	3	20	9	48	1:15 pm	27	141	30	134	57	275
1:30 am	8	28	8	18	16	46	1:30 pm	38	150	43	135	81	285
1:45 am	7	24	5	12	12	36	1:45 pm	31	150	34	131	65	281
2:00 am	7	23	4	12	11	35	2:00 pm	45	151	27	138	72	289
2:15 am	6	20	1	9	7	29	2:15 pm	36	138	31	150	67	288
2:30 am	4	21	2	11	6	32	2:30 pm	38	139	39	150	77	289
2:45 am	6	25	5	12	11	37	2:45 pm	32	135	41	131	73	266
3:00 am	4	21	1	10	5	31	3:00 pm	32	145	39	114	71	259
3:15 am	7	21	3	11	10	32	3:15 pm	37	159	31	121	68	280
3:30 am	8	18	3	8	11	26	3:30 pm	34	146	20	131	54	277
3:45 am	2	11	3	9	5	20	3:45 pm	42	144	24	139	66	283
4:00 am	4	12	2	6	6	18	4:00 pm	46	120	46	138	92	258
4:15 am	4	10	0	11	4	21	4:15 pm	24	91	41	112	65	203
4:30 am	1	7	4	14	5	21	4:30 pm	32	104	28	110	60	214
4:45 am	3	8	0	12	3	20	4:45 pm	18	101	23	114	41	215
5:00 am	2	8	7	14	9	22	5:00 pm	17	125	20	129	37	254
5:15 am	1	8	3	16	4	24	5:15 pm	37	136	39	144	76	280
5:30 am	2	10	2	16	4	26	5:30 pm	29	132	32	139	61	271
5:45 am	3	11	2	21	5	32	5:45 pm	42	127	38	149	80	276
6:00 am	2	10	9	23	11	33	6:00 pm	28	117	35	144	63	261
6:15 am	3	13	3	25	6	38	6:15 pm	33	109	34	142	67	251
6:30 am	3	15	7	29	10	44	6:30 pm	24	103	42	135	66	238
6:45 am	2	17	4	29	6	46	6:45 pm	32	104	33	131	65	235
7:00 am	5	24	11	27	16	51	7:00 pm	20	100	33	124	53	224
7:15 am	5	31	7	32	12	63	7:15 pm	27	110	27	117	54	227
7:30 am	5	36	7	40	12	76	7:30 pm	25	120	38	122	63	242
7:45 am	9	42	2	66	11	108	7:45 pm	28	128	26	112	54	240
8:00 am	12	49	16	80	28	129	8:00 pm	30	129	26	107	56	236
8:15 am	10	48	15	83	25	131	8:15 pm	37	123	32	97	69	220
8:30 am	11	56	33	87	44	143	8:30 pm	33	101	28	84	61	185
8:45 am	16	57	16	84	32	141	8:45 pm	29	79	21	63	50	142
9:00 am	11	68	19	107	30	175	9:00 pm	24	73	16	54	40	127
9:15 am	18	67	19	109	37	176	9:15 pm	15	76	19	50	34	126
9:30 am	12	75	30	122	42	197	9:30 pm	11	83	7	43	18	126
9:45 am	27	92	39	127	66	219	9:45 pm	23	86	12	46	35	132
10:00 am	10	89	21	121	31	210	10:00 pm	27	77	12	45	39	122
10:15 am	26	108	32	138	58	246	10:15 pm	22	66	12	45	34	111
10:30 am	29	102	35	132	64	234	10:30 pm	14	59	10	39	24	98
10:45 am	24	94	33	120	57	214	10:45 pm	14	57	11	34	25	91
11:00 am	29	103	38	119	67	222	11:00 pm	16	51	12	29	28	80
11:15 am	20	100	26	114	46	214	11:15 pm	15		6		21	
11:30 am	21	109	23	119	44	228	11:30 pm	12		5		17	
11:45 am	33	112	32	132	65	244	11:45 pm	8		6		14	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	3684	10:15 am	246	2:00 pm	289
E/B	1828	11:45 am	112	3:15 pm	159
W/B	1856	10:15 am	138	2:15 pm	150

Run Date: *08/25/2010*

Run Time: *9:09 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1A9-1B2
Page: 1

Count Date: 08/14/2010 12:00 am Saturday Condition: : Location: FIJI WAY W/O ADMIRALTY WAY

Align Coord:

	E/B		W/B		Total			E/B		W/B		Total	
Time	15'	Hour	15'	Hour	15'	Hour	Time	15'	Hour	15'	Hour	15'	Hour
12:00 am	12	48	6	30	18	78	12:00 pm	43	256	94	373	137	629
12:15 am	9	51	12	28	21	79	12:15 pm	68	285	109	383	177	668
12:30 am	19	52	8	19	27	71	12:30 pm	45	279	78	342	123	621
12:45 am	8	43	4	19	12	62	12:45 pm	100	305	92	336	192	641
1:00 am	15	41	4	19	19	60	1:00 pm	72	263	104	344	176	607
1:15 am	10	31	3	20	13	51	1:15 pm	62	296	68	332	130	628
1:30 am	10	26	8	27	18	53	1:30 pm	71	332	72	348	143	680
1:45 am	6	21	4	24	10	45	1:45 pm	58	357	100	343	158	700
2:00 am	5	21	5	26	10	47	2:00 pm	105	385	92	313	197	698
2:15 am	5	16	10	23	15	39	2:15 pm	98	367	84	300	182	667
2:30 am	5	12	5	17	10	29	2:30 pm	96	371	67	294	163	665
2:45 am	6	8	6	12	12	20	2:45 pm	86	375	70	314	156	689
3:00 am	0	4	2	10	2	14	3:00 pm	87	411	79	340	166	751
3:15 am	1	4	4	14	5	18	3:15 pm	102	428	78	328	180	756
3:30 am	1	6	0	16	1	22	3:30 pm	100	412	87	318	187	730
3:45 am	2	5	4	32	6	37	3:45 pm	122	390	96	296	218	686
4:00 am	0	8	6	40	6	48	4:00 pm	104	362	67	285	171	647
4:15 am	3	11	6	48	9	59	4:15 pm	86	338	68	306	154	644
4:30 am	0	11	16	56	16	67	4:30 pm	78	360	65	308	143	668
4:45 am	5	19	12	56	17	75	4:45 pm	94	362	85	311	179	673
5:00 am	3	25	14	82	17	107	5:00 pm	80	324	88	302	168	626
5:15 am	3	29	14	98	17	127	5:15 pm	108	321	70	285	178	606
5:30 am	8	36	16	108	24	144	5:30 pm	80	291	68	311	148	602
5:45 am	11	31	38	124	49	155	5:45 pm	56	285	76	352	132	637
6:00 am	7	35	30	138	37	173	6:00 pm	77	302	71	402	148	704
6:15 am	10	44	24	148	34	192	6:15 pm	78	277	96	429	174	706
6:30 am	3	52	32	164	35	216	6:30 pm	74	261	109	387	183	648
6:45 am	15	68	52	168	67	236	6:45 pm	73	239	126	346	199	585
7:00 am	16	88	40	174	56	262	7:00 pm	52	222	98	272	150	494
7:15 am	18	97	40	180	58	277	7:15 pm	62	258	54	217	116	475
7:30 am	19	108	36	194	55	302	7:30 pm	52	262	68	207	120	469
7:45 am	35	111	58	212	93	323	7:45 pm	56	260	52	193	108	453
8:00 am	25	103	46	208	71	311	8:00 pm	88	262	43	179	131	441
8:15 am	29	108	54	196	83	304	8:15 pm	66	237	44	171	110	408
8:30 am	22	109	54	182	76	291	8:30 pm	50	227	54	158	104	385
8:45 am	27	121	54	184	81	305	8:45 pm	58	242	38	148	96	390
9:00 am	30	120	34	178	64	298	9:00 pm	63	216	35	139	98	355
9:15 am	30	122	40	224	70	346	9:15 pm	56	205	31	130	87	335
9:30 am	34	150	56	265	90	415	9:30 pm	65	202	44	114	109	316
9:45 am	26	160	48	292	74	452	9:45 pm	32	189	29	84	61	273
10:00 am	32	174	80	325	112	499	10:00 pm	52	213	26	68	78	281
10:15 am	58	190	81	341	139	531	10:15 pm	53	214	15	60	68	274
10:30 am	44	187	83	360	127	547	10:30 pm	52	198	14	50	66	248
10:45 am	40	184	81	359	121	543	10:45 pm	56	174	13	52	69	226
11:00 am	48	198	96	385	144	583	11:00 pm	53	142	18	47	71	189
11:15 am	55	193	100	383	155	576	11:15 pm	37		5		42	
11:30 am	41	206	82	392	123	598	11:30 pm	28		16		44	
11:45 am	54	210	107	388	161	598	11:45 pm	24		8		32	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	8902	11:30 am	598	3:15 pm	756
E/B	4223	11:45 am	210	3:15 pm	428
W/B	4679	11:30 am	392	6:15 pm	429

Run Date: *08/25/2010*
Run Time: *9:09 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1A9-1B2
Page: 1

Count Date: 08/15/2010 12:00 am Sunday Condition: : Location: FIJI WAY W/O ADMIRALTY WAY
Align Coord:

Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour	Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour
12:00 am	49	107	13	29	62	136	12:00 pm	50	256	64	343	114	599
12:15 am	30	74	5	25	35	99	12:15 pm	47	269	94	379	141	648
12:30 am	9	55	6	26	15	81	12:30 pm	88	304	88	381	176	685
12:45 am	19	52	5	25	24	77	12:45 pm	71	298	97	381	168	679
1:00 am	16	40	9	27	25	67	1:00 pm	63	329	100	392	163	721
1:15 am	11	25	6	23	17	48	1:15 pm	82	362	96	373	178	735
1:30 am	6	23	5	21	11	44	1:30 pm	82	369	88	365	170	734
1:45 am	7	18	7	18	14	36	1:45 pm	102	377	108	373	210	750
2:00 am	1	12	5	12	6	24	2:00 pm	96	369	81	355	177	724
2:15 am	9	11	4	8	13	19	2:15 pm	89	377	88	362	177	739
2:30 am	1	2	2	4	3	6	2:30 pm	90	364	96	347	186	711
2:45 am	1	2	1	6	2	8	2:45 pm	94	380	90	325	184	705
3:00 am	0	2	1	6	1	8	3:00 pm	104	391	88	305	192	696
3:15 am	0	4	0	7	0	11	3:15 pm	76	383	73	302	149	685
3:30 am	1	4	4	8	5	12	3:30 pm	106	413	74	281	180	694
3:45 am	1	3	1	7	2	10	3:45 pm	105	402	70	284	175	686
4:00 am	2	3	2	10	4	13	4:00 pm	96	388	85	282	181	670
4:15 am	0	7	1	19	1	26	4:15 pm	106	405	52	256	158	661
4:30 am	0	7	3	29	3	36	4:30 pm	95	403	77	278	172	681
4:45 am	1	11	4	48	5	59	4:45 pm	91	401	68	280	159	681
5:00 am	6	20	11	66	17	86	5:00 pm	113	396	59	264	172	660
5:15 am	0	24	11	70	11	94	5:15 pm	104	371	74	267	178	638
5:30 am	4	33	22	81	26	114	5:30 pm	93	335	79	267	172	602
5:45 am	10	35	22	75	32	110	5:45 pm	86	305	52	240	138	545
6:00 am	10	37	15	81	25	118	6:00 pm	88	275	62	244	150	519
6:15 am	9	39	22	100	31	139	6:15 pm	68	261	74	244	142	505
6:30 am	6	45	16	106	22	151	6:30 pm	63	264	52	214	115	478
6:45 am	12	51	28	128	40	179	6:45 pm	56	247	56	206	112	453
7:00 am	12	51	34	134	46	185	7:00 pm	74	235	62	206	136	441
7:15 am	15	55	28	137	43	192	7:15 pm	71	219	44	186	115	405
7:30 am	12	54	38	151	50	205	7:30 pm	46	192	44	174	90	366
7:45 am	12	56	34	182	46	238	7:45 pm	44	198	56	174	100	372
8:00 am	16	69	37	198	53	267	8:00 pm	58	192	42	146	100	338
8:15 am	14	73	42	213	56	286	8:15 pm	44	186	32	130	76	316
8:30 am	14	79	69	211	83	290	8:30 pm	52	200	44	121	96	321
8:45 am	25	100	50	187	75	287	8:45 pm	38	194	28	93	66	287
9:00 am	20	107	52	201	72	308	9:00 pm	52	202	26	82	78	284
9:15 am	20	127	40	221	60	348	9:15 pm	58	187	23	82	81	269
9:30 am	35	147	45	253	80	400	9:30 pm	46	156	16	70	62	226
9:45 am	32	146	64	280	96	426	9:45 pm	46	132	17	68	63	200
10:00 am	40	146	72	300	112	446	10:00 pm	37	107	26	68	63	175
10:15 am	40	137	72	318	112	455	10:15 pm	27	109	11	54	38	163
10:30 am	34	145	72	338	106	483	10:30 pm	22	125	14	62	36	187
10:45 am	32	161	84	362	116	523	10:45 pm	21	114	17	54	38	168
11:00 am	31	179	90	376	121	555	11:00 pm	39	96	12	38	51	134
11:15 am	48	198	92	350	140	548	11:15 pm	43		19		62	
11:30 am	50	197	96	352	146	549	11:30 pm	11		6		17	
11:45 am	50	235	98	344	148	579	11:45 pm	3		1		4	

24 Hour Direction	24 Hour Volume	AM Peak Hour Time	AM Peak Hour Volume	PM Peak Hour Time	PM Peak Hour Volume
Total	8174	11:45 am	579	1:45 pm	750
E/B	4009	11:45 am	235	3:30 pm	413
W/B	4165	11:00 am	376	1:00 pm	392

Run Date: *08/25/2010*
Run Time: *9:09 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1G3-1G6
Page: 1

Count Date: 08/21/2010 12:00 am Saturday   Condition: :   Location: MINDANAO WAY W/O ADMIRALTY WAY
Align Coord:

Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour	Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour
12:00 am	10	22	4	11	14	33	12:00 pm	36	137	36	133	72	270
12:15 am	5	16	3	7	8	23	12:15 pm	44	139	36	129	80	268
12:30 am	3	12	0	7	3	19	12:30 pm	30	125	28	125	58	250
12:45 am	4	10	4	7	8	17	12:45 pm	27	117	33	133	60	250
1:00 am	4	8	0	6	4	14	1:00 pm	38	134	32	144	70	278
1:15 am	1	4	3	6	4	10	1:15 pm	30	128	32	146	62	274
1:30 am	1	5	0	5	1	10	1:30 pm	22	140	36	151	58	291
1:45 am	2	6	3	8	5	14	1:45 pm	44	148	44	136	88	284
2:00 am	0	4	0	5	0	9	2:00 pm	32	169	34	136	66	305
2:15 am	2	4	2	5	4	9	2:15 pm	42	189	37	144	79	333
2:30 am	2	3	3	3	5	6	2:30 pm	30	175	21	139	51	314
2:45 am	0	1	0	0	0	1	2:45 pm	65	175	44	162	109	337
3:00 am	0	2	0	0	0	2	3:00 pm	52	154	42	148	94	302
3:15 am	1	2	0	0	1	2	3:15 pm	28	137	32	138	60	275
3:30 am	0	2	0	0	0	2	3:30 pm	30	139	44	141	74	280
3:45 am	1	4	0	1	1	5	3:45 pm	44	158	30	128	74	286
4:00 am	0	3	0	2	0	5	4:00 pm	35	153	32	128	67	281
4:15 am	1	4	0	2	1	6	4:15 pm	30	156	35	115	65	271
4:30 am	2	5	1	4	3	9	4:30 pm	49	168	31	96	80	264
4:45 am	0	4	1	7	1	11	4:45 pm	39	142	30	80	69	222
5:00 am	1	7	0	12	1	19	5:00 pm	38	130	19	76	57	206
5:15 am	2	12	2	14	4	26	5:15 pm	42	134	16	86	58	220
5:30 am	1	14	4	18	5	32	5:30 pm	23	134	15	95	38	229
5:45 am	3	17	6	18	9	35	5:45 pm	27	149	26	97	53	246
6:00 am	6	18	2	14	8	32	6:00 pm	42	164	29	103	71	267
6:15 am	4	16	6	18	10	34	6:15 pm	42	152	25	114	67	266
6:30 am	4	16	4	20	8	36	6:30 pm	38	150	17	128	55	278
6:45 am	4	19	2	19	6	38	6:45 pm	42	140	32	137	74	277
7:00 am	4	27	6	27	10	54	7:00 pm	30	120	40	129	70	249
7:15 am	4	31	8	33	12	64	7:15 pm	40	123	39	107	79	230
7:30 am	7	39	3	41	10	80	7:30 pm	28	106	26	79	54	185
7:45 am	12	46	10	64	22	110	7:45 pm	22	122	24	62	46	184
8:00 am	8	42	12	87	20	129	8:00 pm	33	134	18	46	51	180
8:15 am	12	46	16	102	28	148	8:15 pm	23	116	11	41	34	157
8:30 am	14	48	26	102	40	150	8:30 pm	44	121	9	41	53	162
8:45 am	8	52	33	101	41	153	8:45 pm	34	125	8	43	42	168
9:00 am	12	66	27	98	39	164	9:00 pm	15	119	13	43	28	162
9:15 am	14	76	16	101	30	177	9:15 pm	28	124	11	36	39	160
9:30 am	18	86	25	115	43	201	9:30 pm	48	108	11	29	59	137
9:45 am	22	96	30	109	52	205	9:45 pm	28	64	8	19	36	83
10:00 am	22	96	30	113	52	209	10:00 pm	20	38	6	14	26	52
10:15 am	24	98	30	103	54	201	10:15 pm	12	26	4	16	16	42
10:30 am	28	106	19	89	47	195	10:30 pm	4	24	1	16	5	40
10:45 am	22	102	34	98	56	200	10:45 pm	2	20	3	16	5	36
11:00 am	24	123	20	96	44	219	11:00 pm	8	20	8	20	16	40
11:15 am	32	135	16	112	48	247	11:15 pm	10		4		14	
11:30 am	24	147	28	132	52	279	11:30 pm	0		1		1	
11:45 am	43	153	32	132	75	285	11:45 pm	2		7		9	

24 Hour Direction	24 Hour Volume	AM Peak Hour Time	AM Peak Hour Volume	PM Peak Hour Time	PM Peak Hour Volume
Total	3481	11:45 am	285	2:45 pm	337
E/B	1890	11:45 am	153	2:15 pm	189
W/B	1591	11:30 am	132	2:45 pm	162

Run Date: *08/25/2010*
Run Time: *9:09 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1G3-1G6
Page: 1

Count Date: 08/22/2010 12:00 am Sunday   Condition: :   Location: MINDANAO WAY W/O ADMIRALTY WAY
Align Coord:

Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour	Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour
12:00 am	2	15	2	6	4	21	12:00 pm	26	106	46	167	72	273
12:15 am	11	14	2	6	13	20	12:15 pm	32	108	41	163	73	271
12:30 am	1	3	1	5	2	8	12:30 pm	20	106	44	166	64	272
12:45 am	1	3	1	5	2	8	12:45 pm	28	132	36	174	64	306
1:00 am	1	2	2	4	3	6	1:00 pm	28	138	42	177	70	315
1:15 am	0	5	1	3	1	8	1:15 pm	30	159	44	169	74	328
1:30 am	1	5	1	3	2	8	1:30 pm	46	153	52	147	98	300
1:45 am	0	4	0	4	0	8	1:45 pm	34	145	39	129	73	274
2:00 am	4	4	1	4	5	8	2:00 pm	49	161	34	130	83	291
2:15 am	0	0	1	4	1	4	2:15 pm	24	156	22	140	46	296
2:30 am	0	1	2	3	2	4	2:30 pm	38	178	34	154	72	332
2:45 am	0	1	0	2	0	3	2:45 pm	50	195	40	154	90	349
3:00 am	0	1	1	2	1	3	3:00 pm	44	187	44	143	88	330
3:15 am	1	1	0	1	1	2	3:15 pm	46	183	36	121	82	304
3:30 am	0	1	1	1	1	2	3:30 pm	55	178	34	118	89	296
3:45 am	0	2	0	1	0	3	3:45 pm	42	173	29	120	71	293
4:00 am	0	5	0	2	0	7	4:00 pm	40	179	22	124	62	303
4:15 am	1	6	0	3	1	9	4:15 pm	41	203	33	127	74	330
4:30 am	1	7	1	6	2	13	4:30 pm	50	218	36	124	86	342
4:45 am	3	9	1	11	4	20	4:45 pm	48	230	33	108	81	338
5:00 am	1	8	1	12	2	20	5:00 pm	64	226	25	91	89	317
5:15 am	2	7	3	14	5	21	5:15 pm	56	201	30	77	86	278
5:30 am	3	9	6	14	9	23	5:30 pm	62	185	20	67	82	252
5:45 am	2	7	2	10	4	17	5:45 pm	44	163	16	66	60	229
6:00 am	0	10	3	14	3	24	6:00 pm	39	168	11	66	50	234
6:15 am	4	13	3	13	7	26	6:15 pm	40	167	20	71	60	238
6:30 am	1	13	2	17	3	30	6:30 pm	40	147	19	64	59	211
6:45 am	5	20	6	19	11	39	6:45 pm	49	130	16	57	65	187
7:00 am	3	21	2	21	5	42	7:00 pm	38	107	16	55	54	162
7:15 am	4	26	7	32	11	58	7:15 pm	20	86	13	51	33	137
7:30 am	8	29	4	39	12	68	7:30 pm	23	80	12	47	35	127
7:45 am	6	29	8	47	14	76	7:45 pm	26	71	14	46	40	117
8:00 am	8	39	13	58	21	97	8:00 pm	17	61	12	35	29	96
8:15 am	7	42	14	65	21	107	8:15 pm	14	58	9	28	23	86
8:30 am	8	55	12	75	20	130	8:30 pm	14	50	11	23	25	73
8:45 am	16	63	19	87	35	150	8:45 pm	16	45	3	16	19	61
9:00 am	11	67	20	93	31	160	9:00 pm	14	32	5	14	19	46
9:15 am	20	71	24	90	44	161	9:15 pm	6	32	4	12	10	44
9:30 am	16	61	24	90	40	151	9:30 pm	9	28	4	10	13	38
9:45 am	20	63	25	91	45	154	9:45 pm	3	27	1	14	4	41
10:00 am	15	63	17	97	32	160	10:00 pm	14	26	3	17	17	43
10:15 am	10	74	24	104	34	178	10:15 pm	2	18	2	16	4	34
10:30 am	18	88	25	109	43	197	10:30 pm	8	16	8	15	16	31
10:45 am	20	110	31	117	51	227	10:45 pm	2	9	4	10	6	19
11:00 am	26	114	24	115	50	229	11:00 pm	6	9	2	8	8	17
11:15 am	24	114	29	137	53	251	11:15 pm	0		1		1	
11:30 am	40	122	33	149	73	271	11:30 pm	1		3		4	
11:45 am	24	102	29	160	53	262	11:45 pm	2		2		4	

24 Hour Direction	24 Hour Volume	AM Peak Hour Time	AM Peak Hour Volume	PM Peak Hour Time	PM Peak Hour Volume
Total	3204	11:30 am	271	2:45 pm	349
E/B	1749	11:30 am	122	4:45 pm	230
W/B	1455	11:45 am	160	1:00 pm	177

Run Date: *08/25/2010*

Run Time: *9:10 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1H1-1H4
Page: 1

Count Date: 08/21/2010 12:00 am Saturday   Condition: :   Location: PALAWAN WAY S/O ADMIRALTY WAY

Align Coord:

Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour	Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour
12:00 am	6	56	13	51	19	107	12:00 pm	42	157	46	161	88	318
12:15 am	15	73	17	44	32	117	12:15 pm	40	151	40	151	80	302
12:30 am	16	69	15	35	31	104	12:30 pm	29	142	42	140	71	282
12:45 am	19	68	6	26	25	94	12:45 pm	46	137	33	144	79	281
1:00 am	23	83	6	30	29	113	1:00 pm	36	117	36	143	72	260
1:15 am	11	103	8	29	19	132	1:15 pm	31	124	29	153	60	277
1:30 am	15	110	6	28	21	138	1:30 pm	24	144	46	156	70	300
1:45 am	34	108	10	25	44	133	1:45 pm	26	156	32	160	58	316
2:00 am	43	77	5	16	48	93	2:00 pm	43	157	46	160	89	317
2:15 am	18	35	7	16	25	51	2:15 pm	51	150	32	159	83	309
2:30 am	13	18	3	10	16	28	2:30 pm	36	139	50	167	86	306
2:45 am	3	9	1	9	4	18	2:45 pm	27	145	32	151	59	296
3:00 am	1	7	5	11	6	18	3:00 pm	36	152	45	155	81	307
3:15 am	1	7	1	6	2	13	3:15 pm	40	156	40	139	80	295
3:30 am	4	7	2	7	6	14	3:30 pm	42	144	34	126	76	270
3:45 am	1	4	3	8	4	12	3:45 pm	34	146	36	118	70	264
4:00 am	1	10	0	9	1	19	4:00 pm	40	157	29	117	69	274
4:15 am	1	12	2	11	3	23	4:15 pm	28	153	27	119	55	272
4:30 am	1	13	3	12	4	25	4:30 pm	44	158	26	121	70	279
4:45 am	7	16	4	14	11	30	4:45 pm	45	140	35	136	80	276
5:00 am	3	14	2	13	5	27	5:00 pm	36	129	31	135	67	264
5:15 am	2	12	3	13	5	25	5:15 pm	33	135	29	145	62	280
5:30 am	4	12	5	19	9	31	5:30 pm	26	129	41	148	67	277
5:45 am	5	12	3	25	8	37	5:45 pm	34	148	34	140	68	288
6:00 am	1	23	2	43	3	66	6:00 pm	42	136	41	140	83	276
6:15 am	2	31	9	67	11	98	6:15 pm	27	120	32	127	59	247
6:30 am	4	41	11	78	15	119	6:30 pm	45	126	33	127	78	253
6:45 am	16	49	21	82	37	131	6:45 pm	22	111	34	120	56	231
7:00 am	9	43	26	82	35	125	7:00 pm	26	117	28	108	54	225
7:15 am	12	47	20	71	32	118	7:15 pm	33	124	32	105	65	229
7:30 am	12	53	15	71	27	124	7:30 pm	30	121	26	96	56	217
7:45 am	10	60	21	82	31	142	7:45 pm	28	111	22	93	50	204
8:00 am	13	84	15	83	28	167	8:00 pm	33	103	25	93	58	196
8:15 am	18	95	20	90	38	185	8:15 pm	30	87	23	86	53	173
8:30 am	19	125	26	98	45	223	8:30 pm	20	77	23	84	43	161
8:45 am	34	135	22	99	56	234	8:45 pm	20	101	22	83	42	184
9:00 am	24	133	22	113	46	246	9:00 pm	17	109	18	90	35	199
9:15 am	48	143	28	115	76	258	9:15 pm	20	122	21	104	41	226
9:30 am	29	129	27	116	56	245	9:30 pm	44	118	22	105	66	223
9:45 am	32	140	36	119	68	259	9:45 pm	28	96	29	102	57	198
10:00 am	34	135	24	115	58	250	10:00 pm	30	88	32	93	62	181
10:15 am	34	144	29	123	63	267	10:15 pm	16	76	22	82	38	158
10:30 am	40	135	30	118	70	253	10:30 pm	22	94	19	94	41	188
10:45 am	27	131	32	118	59	249	10:45 pm	20	94	20	91	40	185
11:00 am	43	134	32	119	75	253	11:00 pm	18	109	21	92	39	201
11:15 am	25	133	24	133	49	266	11:15 pm	34		34		68	
11:30 am	36	148	30	149	66	297	11:30 pm	22		16		38	
11:45 am	30	141	33	161	63	302	11:45 pm	35		21		56	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	4502	11:45 am	302	12:00 pm	318
N/B	2330	11:30 am	148	4:30 pm	158
S/B	2172	11:45 am	161	2:30 pm	167

Run Date: *08/25/2010*

Run Time: *9:10 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1H1-1H4
Page: 1

Count Date: 08/22/2010 12:00 am Sunday   Condition: :   Location: PALAWAN WAY S/O ADMIRALTY WAY

Align Coord:

Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour	Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour
12:00 am	20	72	14	48	34	120	12:00 pm	30	128	40	151	70	279
12:15 am	22	64	12	49	34	113	12:15 pm	34	116	36	146	70	262
12:30 am	16	52	9	41	25	93	12:30 pm	36	124	44	154	80	278
12:45 am	14	47	13	38	27	85	12:45 pm	28	142	31	157	59	299
1:00 am	12	61	15	34	27	95	1:00 pm	18	155	35	161	53	316
1:15 am	10	78	4	29	14	107	1:15 pm	42	166	44	156	86	322
1:30 am	11	79	6	30	17	109	1:30 pm	54	154	47	142	101	296
1:45 am	28	73	9	27	37	100	1:45 pm	41	148	35	137	76	285
2:00 am	29	46	10	20	39	66	2:00 pm	29	137	30	140	59	277
2:15 am	11	20	5	12	16	32	2:15 pm	30	142	30	145	60	287
2:30 am	5	10	3	10	8	20	2:30 pm	48	154	42	147	90	301
2:45 am	1	7	2	7	3	14	2:45 pm	30	148	38	142	68	290
3:00 am	3	11	2	7	5	18	3:00 pm	34	148	35	143	69	291
3:15 am	1	8	3	5	4	13	3:15 pm	42	154	32	149	74	303
3:30 am	2	7	0	2	2	9	3:30 pm	42	166	37	165	79	331
3:45 am	5	5	2	4	7	9	3:45 pm	30	170	39	169	69	339
4:00 am	0	3	0	5	0	8	4:00 pm	40	178	41	166	81	344
4:15 am	0	5	0	8	0	13	4:15 pm	54	175	48	160	102	335
4:30 am	0	9	2	12	2	21	4:30 pm	46	163	41	139	87	302
4:45 am	3	11	3	13	6	24	4:45 pm	38	162	36	126	74	288
5:00 am	2	14	3	14	5	28	5:00 pm	37	161	35	118	72	279
5:15 am	4	16	4	13	8	29	5:15 pm	42	153	27	116	69	269
5:30 am	2	16	3	16	5	32	5:30 pm	45	145	28	131	73	276
5:45 am	6	19	4	21	10	40	5:45 pm	37	137	28	133	65	270
6:00 am	4	25	2	27	6	52	6:00 pm	29	130	33	132	62	262
6:15 am	4	26	7	37	11	63	6:15 pm	34	131	42	117	76	248
6:30 am	5	29	8	51	13	80	6:30 pm	37	133	30	99	67	232
6:45 am	12	36	10	65	22	101	6:45 pm	30	138	27	95	57	233
7:00 am	5	33	12	76	17	109	7:00 pm	30	148	18	100	48	248
7:15 am	7	45	21	74	28	119	7:15 pm	36	173	24	100	60	273
7:30 am	12	54	22	70	34	124	7:30 pm	42	176	26	105	68	281
7:45 am	9	60	21	55	30	115	7:45 pm	40	168	32	107	72	275
8:00 am	17	73	10	49	27	122	8:00 pm	55	158	18	100	73	258
8:15 am	16	70	17	51	33	121	8:15 pm	39	151	29	114	68	265
8:30 am	18	80	7	50	25	130	8:30 pm	34	131	28	105	62	236
8:45 am	22	79	15	66	37	145	8:45 pm	30	115	25	96	55	211
9:00 am	14	83	12	75	26	158	9:00 pm	48	99	32	92	80	191
9:15 am	26	89	16	87	42	176	9:15 pm	19	71	20	72	39	143
9:30 am	17	97	23	93	40	190	9:30 pm	18	64	19	82	37	146
9:45 am	26	105	24	103	50	208	9:45 pm	14	57	21	78	35	135
10:00 am	20	104	24	114	44	218	10:00 pm	20	55	12	66	32	121
10:15 am	34	114	22	138	56	252	10:15 pm	12	42	30	65	42	107
10:30 am	25	100	33	152	58	252	10:30 pm	11	52	15	49	26	101
10:45 am	25	101	35	156	60	257	10:45 pm	12	54	9	48	21	102
11:00 am	30	104	48	165	78	269	11:00 pm	7	56	11	47	18	103
11:15 am	20	104	36	157	56	261	11:15 pm	22		14		36	
11:30 am	26	118	37	157	63	275	11:30 pm	13		14		27	
11:45 am	28	128	44	164	72	292	11:45 pm	14		8		22	

24 Hour Direction	24 Hour Volume	AM Peak Hour Time	AM Peak Hour Volume	PM Peak Hour Time	PM Peak Hour Volume
Total	4232	11:45 am	292	4:00 pm	344
N/B	2182	11:45 am	128	4:00 pm	178
S/B	2050	11:00 am	165	3:45 pm	169

Run Date: *08/25/2010*

Run Time: *9:10 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.

Machine Traffic Count

Report ID: 1G7-1H0

Page: 1

Count Date: 08/21/2010 12:00 am Saturday   Condition: :   Location: PALAWAN WAY N/O ADMIRALTY WAY

Align Coord:

Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour	Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour
12:00 am	8	41	12	40	20	81	12:00 pm	47	142	64	199	111	341
12:15 am	10	41	9	32	19	73	12:15 pm	42	147	54	186	96	333
12:30 am	11	32	7	31	18	63	12:30 pm	22	137	37	176	59	313
12:45 am	12	27	12	26	24	53	12:45 pm	31	147	44	215	75	362
1:00 am	8	33	4	16	12	49	1:00 pm	52	147	51	246	103	393
1:15 am	1	45	8	15	9	60	1:15 pm	32	132	44	283	76	415
1:30 am	6	56	2	13	8	69	1:30 pm	32	139	76	299	108	438
1:45 am	18	58	2	14	20	72	1:45 pm	31	152	75	275	106	427
2:00 am	20	44	3	14	23	58	2:00 pm	37	153	88	242	125	395
2:15 am	12	26	6	13	18	39	2:15 pm	39	151	60	212	99	363
2:30 am	8	15	3	8	11	23	2:30 pm	45	138	52	220	97	358
2:45 am	4	9	2	6	6	15	2:45 pm	32	117	42	210	74	327
3:00 am	2	5	2	5	4	10	3:00 pm	35	123	58	221	93	344
3:15 am	1	5	1	3	2	8	3:15 pm	26	118	68	243	94	361
3:30 am	2	4	1	5	3	9	3:30 pm	24	120	42	256	66	376
3:45 am	0	4	1	7	1	11	3:45 pm	38	126	53	280	91	406
4:00 am	2	6	0	10	2	16	4:00 pm	30	115	80	283	110	398
4:15 am	0	8	3	12	3	20	4:15 pm	28	113	81	264	109	377
4:30 am	2	10	3	11	5	21	4:30 pm	30	113	66	235	96	348
4:45 am	2	9	4	12	6	21	4:45 pm	27	113	56	229	83	342
5:00 am	4	9	2	14	6	23	5:00 pm	28	115	61	223	89	338
5:15 am	2	8	2	13	4	21	5:15 pm	28	125	52	232	80	357
5:30 am	1	12	4	15	5	27	5:30 pm	30	123	60	222	90	345
5:45 am	2	21	6	21	8	42	5:45 pm	29	123	50	226	79	349
6:00 am	3	25	1	25	4	50	6:00 pm	38	121	70	237	108	358
6:15 am	6	33	4	38	10	71	6:15 pm	26	118	42	217	68	335
6:30 am	10	38	10	45	20	83	6:30 pm	30	130	64	218	94	348
6:45 am	6	37	10	54	16	91	6:45 pm	27	125	61	206	88	331
7:00 am	11	47	14	66	25	113	7:00 pm	35	124	50	198	85	322
7:15 am	11	52	11	72	22	124	7:15 pm	38	116	43	192	81	308
7:30 am	9	59	19	85	28	144	7:30 pm	25	99	52	188	77	287
7:45 am	16	76	22	100	38	176	7:45 pm	26	98	53	172	79	270
8:00 am	16	98	20	105	36	203	8:00 pm	27	88	44	151	71	239
8:15 am	18	100	24	129	42	229	8:15 pm	21	79	39	137	60	216
8:30 am	26	115	34	145	60	260	8:30 pm	24	80	36	132	60	212
8:45 am	38	123	27	157	65	280	8:45 pm	16	82	32	116	48	198
9:00 am	18	129	44	182	62	311	9:00 pm	18	76	30	105	48	181
9:15 am	33	152	40	188	73	340	9:15 pm	22	76	34	95	56	171
9:30 am	34	153	46	204	80	357	9:30 pm	26	65	20	89	46	154
9:45 am	44	159	52	203	96	362	9:45 pm	10	59	21	90	31	149
10:00 am	41	149	50	193	91	342	10:00 pm	18	64	20	84	38	148
10:15 am	34	140	56	189	90	329	10:15 pm	11	56	28	86	39	142
10:30 am	40	142	45	199	85	341	10:30 pm	20	63	21	69	41	132
10:45 am	34	137	42	212	76	349	10:45 pm	15	53	15	58	30	111
11:00 am	32	137	46	230	78	367	11:00 pm	10	56	22	53	32	109
11:15 am	36	152	66	248	102	400	11:15 pm	18		11		29	
11:30 am	35	158	58	236	93	394	11:30 pm	10		10		20	
11:45 am	34	145	60	215	94	360	11:45 pm	18		10		28	

24 Hour Direction	24 Hour Volume	AM Peak Hour Time	AM Peak Hour Volume	PM Peak Hour Time	PM Peak Hour Volume
Total	5189	11:15 am	400	1:30 pm	438
N/B	2047	9:45 am	159	2:00 pm	153
S/B	3142	11:15 am	248	1:30 pm	299

Run Date: *08/25/2010*

Run Time: *9:10 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1G7-1H0

Page: 1

Count Date: 08/22/2010 12:00 am Sunday Condition: : Location: PALAWAN WAY N/O ADMIRALTY WAY

Align Coord:

Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour	Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour
12:00 am	8	33	8	37	16	70	12:00 pm	28	128	34	153	62	281
12:15 am	3	30	8	41	11	71	12:15 pm	33	123	44	151	77	274
12:30 am	14	33	14	37	28	70	12:30 pm	37	120	33	142	70	262
12:45 am	8	21	7	31	15	52	12:45 pm	30	113	42	141	72	254
1:00 am	5	27	12	34	17	61	1:00 pm	23	111	32	147	55	258
1:15 am	6	37	4	25	10	62	1:15 pm	30	122	35	153	65	275
1:30 am	2	38	8	25	10	63	1:30 pm	30	111	32	148	62	259
1:45 am	14	38	10	20	24	58	1:45 pm	28	109	48	168	76	277
2:00 am	15	26	3	12	18	38	2:00 pm	34	113	38	150	72	263
2:15 am	7	14	4	11	11	25	2:15 pm	19	109	30	146	49	255
2:30 am	2	7	3	7	5	14	2:30 pm	28	120	52	165	80	285
2:45 am	2	9	2	5	4	14	2:45 pm	32	119	30	157	62	276
3:00 am	3	8	2	4	5	12	3:00 pm	30	117	34	181	64	298
3:15 am	0	7	0	4	0	11	3:15 pm	30	119	49	201	79	320
3:30 am	4	7	1	5	5	12	3:30 pm	27	129	44	210	71	339
3:45 am	1	4	1	9	2	13	3:45 pm	30	122	54	232	84	354
4:00 am	2	4	2	12	4	16	4:00 pm	32	124	54	220	86	344
4:15 am	0	3	1	12	1	15	4:15 pm	40	128	58	219	98	347
4:30 am	1	5	5	12	6	17	4:30 pm	20	131	66	193	86	324
4:45 am	1	6	4	11	5	17	4:45 pm	32	144	42	157	74	301
5:00 am	1	9	2	11	3	20	5:00 pm	36	142	53	143	89	285
5:15 am	2	14	1	11	3	25	5:15 pm	43	136	32	130	75	266
5:30 am	2	14	4	14	6	28	5:30 pm	33	129	30	146	63	275
5:45 am	4	16	4	14	8	30	5:45 pm	30	133	28	152	58	285
6:00 am	6	15	2	16	8	31	6:00 pm	30	127	40	164	70	291
6:15 am	2	21	4	20	6	41	6:15 pm	36	121	48	172	84	293
6:30 am	4	29	4	40	8	69	6:30 pm	37	116	36	149	73	265
6:45 am	3	34	6	50	9	84	6:45 pm	24	117	40	145	64	262
7:00 am	12	39	6	62	18	101	7:00 pm	24	120	48	141	72	261
7:15 am	10	43	24	77	34	120	7:15 pm	31	134	25	135	56	269
7:30 am	9	53	14	78	23	131	7:30 pm	38	127	32	142	70	269
7:45 am	8	70	18	90	26	160	7:45 pm	27	108	36	129	63	237
8:00 am	16	85	21	90	37	175	8:00 pm	38	106	42	113	80	219
8:15 am	20	85	25	91	45	176	8:15 pm	24	92	32	91	56	183
8:30 am	26	91	26	86	52	177	8:30 pm	19	90	19	75	38	165
8:45 am	23	80	18	86	41	166	8:45 pm	25	89	20	70	45	159
9:00 am	16	98	22	94	38	192	9:00 pm	24	79	20	67	44	146
9:15 am	26	102	20	104	46	206	9:15 pm	22	71	16	61	38	132
9:30 am	15	112	26	116	41	228	9:30 pm	18	60	14	58	32	118
9:45 am	41	123	26	131	67	254	9:45 pm	15	52	17	53	32	105
10:00 am	20	115	32	139	52	254	10:00 pm	16	52	14	44	30	96
10:15 am	36	129	32	145	68	274	10:15 pm	11	41	13	33	24	74
10:30 am	26	119	41	145	67	264	10:30 pm	10	39	9	24	19	63
10:45 am	33	118	34	146	67	264	10:45 pm	15	41	8	21	23	62
11:00 am	34	113	38	152	72	265	11:00 pm	5	36	3	18	8	54
11:15 am	26	107	32	148	58	255	11:15 pm	9		4		13	
11:30 am	25	114	42	160	67	274	11:30 pm	12		6		18	
11:45 am	28	126	40	151	68	277	11:45 pm	10		5		15	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	4031	11:45 am	277	3:45 pm	354
N/B	1827	10:15 am	129	4:45 pm	144
S/B	2204	11:30 am	160	3:45 pm	232

Run Date: *08/25/2010*

Run Time: *9:15 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1H5-1H8

Page: 1

Count Date: 08/21/2010 12:00 am Saturday   Condition: :   Location: PANAY WAY E/O VIA MARINA

Align Coord:

	E/B		W/B		Total			E/B		W/B		Total	
Time	15'	Hour	15'	Hour	15'	Hour	Time	15'	Hour	15'	Hour	15'	Hour
12:00 am	8	21	12	37	20	58	12:00 pm	37	181	62	198	99	379
12:15 am	4	16	11	38	15	54	12:15 pm	52	190	43	191	95	381
12:30 am	7	18	8	34	15	52	12:30 pm	48	189	44	199	92	388
12:45 am	2	14	6	31	8	45	12:45 pm	44	195	49	198	93	393
1:00 am	3	15	13	32	16	47	1:00 pm	46	191	55	190	101	381
1:15 am	6	14	7	27	13	41	1:15 pm	51	188	51	193	102	381
1:30 am	3	12	5	25	8	37	1:30 pm	54	171	43	196	97	367
1:45 am	3	12	7	25	10	37	1:45 pm	40	151	41	212	81	363
2:00 am	2	10	8	23	10	33	2:00 pm	43	147	58	229	101	376
2:15 am	4	13	5	17	9	30	2:15 pm	34	150	54	218	88	368
2:30 am	3	14	5	16	8	30	2:30 pm	34	156	59	208	93	364
2:45 am	1	15	5	14	6	29	2:45 pm	36	163	58	189	94	352
3:00 am	5	17	2	10	7	27	3:00 pm	46	160	47	179	93	339
3:15 am	5	12	4	10	9	22	3:15 pm	40	166	44	179	84	345
3:30 am	4	10	3	7	7	17	3:30 pm	41	166	40	173	81	339
3:45 am	3	9	1	7	4	16	3:45 pm	33	169	48	174	81	343
4:00 am	0	10	2	11	2	21	4:00 pm	52	180	47	185	99	365
4:15 am	3	13	1	13	4	26	4:15 pm	40	175	38	182	78	357
4:30 am	3	12	3	14	6	26	4:30 pm	44	174	41	185	85	359
4:45 am	4	14	5	16	9	30	4:45 pm	44	170	59	175	103	345
5:00 am	3	16	4	16	7	32	5:00 pm	47	168	44	151	91	319
5:15 am	2	22	2	18	4	40	5:15 pm	39	173	41	165	80	338
5:30 am	5	30	5	24	10	54	5:30 pm	40	170	31	160	71	330
5:45 am	6	29	5	32	11	61	5:45 pm	42	182	35	178	77	360
6:00 am	9	28	6	42	15	70	6:00 pm	52	180	58	177	110	357
6:15 am	10	31	8	56	18	87	6:15 pm	36	160	36	169	72	329
6:30 am	4	41	13	68	17	109	6:30 pm	52	157	49	170	101	327
6:45 am	5	56	15	69	20	125	6:45 pm	40	149	34	155	74	304
7:00 am	12	69	20	69	32	138	7:00 pm	32	151	50	167	82	318
7:15 am	20	80	20	75	40	155	7:15 pm	33	143	37	148	70	291
7:30 am	19	86	14	79	33	165	7:30 pm	44	140	34	141	78	281
7:45 am	18	94	15	89	33	183	7:45 pm	42	134	46	137	88	271
8:00 am	23	114	26	98	49	212	8:00 pm	24	123	31	123	55	246
8:15 am	26	123	24	99	50	222	8:15 pm	30	120	30	129	60	249
8:30 am	27	123	24	115	51	238	8:30 pm	38	118	30	129	68	247
8:45 am	38	136	24	127	62	263	8:45 pm	31	106	32	127	63	233
9:00 am	32	148	27	141	59	289	9:00 pm	21	93	37	121	58	214
9:15 am	26	170	40	164	66	334	9:15 pm	28	90	30	98	58	188
9:30 am	40	171	36	149	76	320	9:30 pm	26	78	28	89	54	167
9:45 am	50	178	38	147	88	325	9:45 pm	18	65	26	75	44	140
10:00 am	54	167	50	140	104	307	10:00 pm	18	63	14	65	32	128
10:15 am	27	152	25	142	52	294	10:15 pm	16	57	21	74	37	131
10:30 am	47	179	34	157	81	336	10:30 pm	13	48	14	61	27	109
10:45 am	39	172	31	161	70	333	10:45 pm	16	55	16	65	32	120
11:00 am	39	172	52	186	91	358	11:00 pm	12	51	23	60	35	111
11:15 am	54	170	40	196	94	366	11:15 pm	7		8		15	
11:30 am	40	168	38	199	78	367	11:30 pm	20		18		38	
11:45 am	39	176	56	205	95	381	11:45 pm	12		11		23	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	5125	11:45 am	381	12:45 pm	393
E/B	2475	10:30 am	179	12:45 pm	195
W/B	2650	11:45 am	205	2:00 pm	229

Run Date: *08/25/2010*

Run Time: *9:15 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1H5-1H8

Page: 1

Count Date: 08/22/2010 12:00 am Sunday   Condition: :   Location: PANAY WAY E/O VIA MARINA

Align Coord:

	E/B		W/B		Total			E/B		W/B		Total	
Time	15'	Hour	15'	Hour	15'	Hour	Time	15'	Hour	15'	Hour	15'	Hour
12:00 am	4	21	9	47	13	68	12:00 pm	34	157	58	193	92	350
12:15 am	7	30	11	48	18	78	12:15 pm	38	157	50	190	88	347
12:30 am	4	31	14	49	18	80	12:30 pm	50	151	46	196	96	347
12:45 am	6	30	13	39	19	69	12:45 pm	35	138	39	199	74	337
1:00 am	13	28	10	33	23	61	1:00 pm	34	145	55	210	89	355
1:15 am	8	18	12	32	20	50	1:15 pm	32	151	56	209	88	360
1:30 am	3	14	4	26	7	40	1:30 pm	37	152	49	201	86	353
1:45 am	4	12	7	23	11	35	1:45 pm	42	150	50	209	92	359
2:00 am	3	10	9	24	12	34	2:00 pm	40	155	54	216	94	371
2:15 am	4	13	6	22	10	35	2:15 pm	33	159	48	210	81	369
2:30 am	1	11	1	16	2	27	2:30 pm	35	166	57	211	92	377
2:45 am	2	10	8	15	10	25	2:45 pm	47	174	57	204	104	378
3:00 am	6	10	7	8	13	18	3:00 pm	44	183	48	202	92	385
3:15 am	2	4	0	2	2	6	3:15 pm	40	183	49	206	89	389
3:30 am	0	4	0	3	0	7	3:30 pm	43	199	50	201	93	400
3:45 am	2	6	1	4	3	10	3:45 pm	56	196	55	199	111	395
4:00 am	0	5	1	4	1	9	4:00 pm	44	200	52	189	96	389
4:15 am	2	5	1	3	3	8	4:15 pm	56	218	44	168	100	386
4:30 am	2	7	1	4	3	11	4:30 pm	40	197	48	166	88	363
4:45 am	1	9	1	7	2	16	4:45 pm	60	197	45	155	105	352
5:00 am	0	11	0	7	0	18	5:00 pm	62	193	31	154	93	347
5:15 am	4	12	2	13	6	25	5:15 pm	35	187	42	160	77	347
5:30 am	4	11	4	15	8	26	5:30 pm	40	182	37	160	77	342
5:45 am	3	15	1	21	4	36	5:45 pm	56	186	44	156	100	342
6:00 am	1	16	6	39	7	55	6:00 pm	56	176	37	151	93	327
6:15 am	3	29	4	41	7	70	6:15 pm	30	154	42	158	72	312
6:30 am	8	35	10	51	18	86	6:30 pm	44	161	33	150	77	311
6:45 am	4	40	19	53	23	93	6:45 pm	46	149	39	144	85	293
7:00 am	14	48	8	45	22	93	7:00 pm	34	139	44	138	78	277
7:15 am	9	57	14	51	23	108	7:15 pm	37	147	34	125	71	272
7:30 am	13	66	12	54	25	120	7:30 pm	32	142	27	129	59	271
7:45 am	12	73	11	57	23	130	7:45 pm	36	138	33	126	69	264
8:00 am	23	82	14	74	37	156	8:00 pm	42	132	31	118	73	250
8:15 am	18	83	17	82	35	165	8:15 pm	32	113	38	106	70	219
8:30 am	20	95	15	84	35	179	8:30 pm	28	95	24	96	52	191
8:45 am	21	111	28	93	49	204	8:45 pm	30	89	25	89	55	178
9:00 am	24	119	22	91	46	210	9:00 pm	23	71	19	84	42	155
9:15 am	30	134	19	112	49	246	9:15 pm	14	70	28	95	42	165
9:30 am	36	143	24	121	60	264	9:30 pm	22	65	17	81	39	146
9:45 am	29	147	26	123	55	270	9:45 pm	12	53	20	78	32	131
10:00 am	39	160	43	151	82	311	10:00 pm	22	47	30	70	52	117
10:15 am	39	150	28	141	67	291	10:15 pm	9	38	14	55	23	93
10:30 am	40	155	26	148	66	303	10:30 pm	10	40	14	49	24	89
10:45 am	42	151	54	175	96	326	10:45 pm	6	37	12	49	18	86
11:00 am	29	147	33	157	62	304	11:00 pm	13	36	15	49	28	85
11:15 am	44	152	35	182	79	334	11:15 pm	11		8		19	
11:30 am	36	146	53	197	89	343	11:30 pm	7		14		21	
11:45 am	38	160	36	190	74	350	11:45 pm	5		12		17	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	4745	11:45 am	350	3:30 pm	400
E/B	2291	10:00 am	160	4:15 pm	218
W/B	2454	11:30 am	197	2:00 pm	216

Run Date: *08/25/2010*

Run Time: *9:11 AM*

Los Angeles County Department of Public Works

900 S. Fremont Ave.

Machine Traffic Count

Report ID: 113-116

Page: 1

Count Date: 08/21/2010 12:00 am Saturday Condition: : Location: VIA MARINA N/O ADMIRALTY WAY

Align Coord:

	N/B		S/B		Total			N/B		S/B		Total	
Time	15'	Hour	15'	Hour	15'	Hour	Time	15'	Hour	15'	Hour	15'	Hour
12:00 am	32	134	62	231	94	365	12:00 pm	135	541	178	681	313	1222
12:15 am	42	133	68	206	110	339	12:15 pm	132	525	179	653	311	1178
12:30 am	34	123	54	180	88	303	12:30 pm	152	517	160	638	312	1155
12:45 am	26	111	47	158	73	269	12:45 pm	122	491	164	646	286	1137
1:00 am	31	105	37	153	68	258	1:00 pm	119	483	150	656	269	1139
1:15 am	32	92	42	154	74	246	1:15 pm	124	486	164	654	288	1140
1:30 am	22	76	32	143	54	219	1:30 pm	126	486	168	657	294	1143
1:45 am	20	61	42	132	62	193	1:45 pm	114	502	174	633	288	1135
2:00 am	18	51	38	111	56	162	2:00 pm	122	505	148	614	270	1119
2:15 am	16	40	31	95	47	135	2:15 pm	124	503	167	625	291	1128
2:30 am	7	34	21	80	28	114	2:30 pm	142	491	144	628	286	1119
2:45 am	10	39	21	69	31	108	2:45 pm	117	486	155	650	272	1136
3:00 am	7	35	22	59	29	94	3:00 pm	120	481	159	653	279	1134
3:15 am	10	34	16	41	26	75	3:15 pm	112	474	170	668	282	1142
3:30 am	12	26	10	32	22	58	3:30 pm	137	488	166	662	303	1150
3:45 am	6	19	11	30	17	49	3:45 pm	112	473	158	664	270	1137
4:00 am	6	23	4	35	10	58	4:00 pm	113	484	174	666	287	1150
4:15 am	2	24	7	47	9	71	4:15 pm	126	520	164	664	290	1184
4:30 am	5	31	8	49	13	80	4:30 pm	122	522	168	668	290	1190
4:45 am	10	33	16	50	26	83	4:45 pm	123	520	160	672	283	1192
5:00 am	7	37	16	52	23	89	5:00 pm	149	507	172	700	321	1207
5:15 am	9	42	9	64	18	106	5:15 pm	128	482	168	697	296	1179
5:30 am	7	47	9	81	16	128	5:30 pm	120	472	172	718	292	1190
5:45 am	14	66	18	104	32	170	5:45 pm	110	492	188	731	298	1223
6:00 am	12	80	28	123	40	203	6:00 pm	124	498	169	739	293	1237
6:15 am	14	100	26	140	40	240	6:15 pm	118	480	189	740	307	1220
6:30 am	26	131	32	176	58	307	6:30 pm	140	478	185	705	325	1183
6:45 am	28	166	37	195	65	361	6:45 pm	116	435	196	700	312	1135
7:00 am	32	196	45	238	77	434	7:00 pm	106	424	170	678	276	1102
7:15 am	45	208	62	249	107	457	7:15 pm	116	433	154	679	270	1112
7:30 am	61	259	51	271	112	530	7:30 pm	97	407	180	681	277	1088
7:45 am	58	294	80	320	138	614	7:45 pm	105	404	174	662	279	1066
8:00 am	44	333	56	335	100	668	8:00 pm	115	381	171	626	286	1007
8:15 am	96	377	84	388	180	765	8:15 pm	90	354	156	603	246	957
8:30 am	96	370	100	421	196	791	8:30 pm	94	320	161	583	255	903
8:45 am	97	382	95	447	192	829	8:45 pm	82	302	138	555	220	857
9:00 am	88	407	109	495	197	902	9:00 pm	88	302	148	539	236	841
9:15 am	89	453	117	500	206	953	9:15 pm	56	298	136	515	192	813
9:30 am	108	496	126	511	234	1007	9:30 pm	76	298	133	494	209	792
9:45 am	122	530	143	515	265	1045	9:45 pm	82	294	122	455	204	749
10:00 am	134	526	114	494	248	1020	10:00 pm	84	278	124	444	208	722
10:15 am	132	524	128	526	260	1050	10:15 pm	56	246	115	415	171	661
10:30 am	142	508	130	544	272	1052	10:30 pm	72	242	94	388	166	630
10:45 am	118	510	122	566	240	1076	10:45 pm	66	224	111	388	177	612
11:00 am	132	534	146	599	278	1133	11:00 pm	52	192	95	351	147	543
11:15 am	116	537	146	631	262	1168	11:15 pm	52		88		140	
11:30 am	144	553	152	664	296	1217	11:30 pm	54		94		148	
11:45 am	142	561	155	672	297	1233	11:45 pm	34		74		108	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	17809	11:45 am	1233	6:00 pm	1237
N/B	7537	11:45 am	561	12:00 pm	541
S/B	10272	11:45 am	672	6:15 pm	740

Run Date: *08/25/2010*

Run Time: *9:11 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 113-116

Page: 1

Count Date: 08/22/2010 12:00 am Sunday   Condition: :   Location: VIA MARINA N/O ADMIRALTY WAY

Align Coord:

Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour	Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour
12:00 am	29	142	65	269	94	411	12:00 pm	132	520	146	610	278	1130
12:15 am	44	140	65	260	109	400	12:15 pm	128	509	164	630	292	1139
12:30 am	39	119	72	247	111	366	12:30 pm	132	511	148	620	280	1131
12:45 am	30	110	67	217	97	327	12:45 pm	128	495	152	628	280	1123
1:00 am	27	113	56	187	83	300	1:00 pm	121	479	166	646	287	1125
1:15 am	23	102	52	174	75	276	1:15 pm	130	462	154	644	284	1106
1:30 am	30	98	42	154	72	252	1:30 pm	116	462	156	640	272	1102
1:45 am	33	78	37	131	70	209	1:45 pm	112	474	170	630	282	1104
2:00 am	16	54	43	114	59	168	2:00 pm	104	476	164	613	268	1089
2:15 am	19	50	32	84	51	134	2:15 pm	130	486	150	591	280	1077
2:30 am	10	39	19	65	29	104	2:30 pm	128	470	146	615	274	1085
2:45 am	9	29	20	57	29	86	2:45 pm	114	482	153	627	267	1109
3:00 am	12	30	13	44	25	74	3:00 pm	114	500	142	658	256	1158
3:15 am	8	23	13	41	21	64	3:15 pm	114	507	174	666	288	1173
3:30 am	0	21	11	34	11	55	3:30 pm	140	530	158	648	298	1178
3:45 am	10	30	7	27	17	57	3:45 pm	132	526	184	655	316	1181
4:00 am	5	26	10	29	15	55	4:00 pm	121	508	150	627	271	1135
4:15 am	6	35	6	37	12	72	4:15 pm	137	527	156	636	293	1163
4:30 am	9	37	4	44	13	81	4:30 pm	136	524	165	644	301	1168
4:45 am	6	38	9	50	15	88	4:45 pm	114	512	156	646	270	1158
5:00 am	14	41	18	51	32	92	5:00 pm	140	518	159	676	299	1194
5:15 am	8	43	13	53	21	96	5:15 pm	134	506	164	699	298	1205
5:30 am	10	54	10	59	20	113	5:30 pm	124	496	167	699	291	1195
5:45 am	9	70	10	78	19	148	5:45 pm	120	477	186	705	306	1182
6:00 am	16	83	20	104	36	187	6:00 pm	128	455	182	689	310	1144
6:15 am	19	92	19	106	38	198	6:15 pm	124	449	164	663	288	1112
6:30 am	26	103	29	120	55	223	6:30 pm	105	435	173	655	278	1090
6:45 am	22	115	36	129	58	244	6:45 pm	98	426	170	640	268	1066
7:00 am	25	141	22	173	47	314	7:00 pm	122	427	156	626	278	1053
7:15 am	30	164	33	201	63	365	7:15 pm	110	396	156	634	266	1030
7:30 am	38	192	38	235	76	427	7:30 pm	96	388	158	628	254	1016
7:45 am	48	235	80	262	128	497	7:45 pm	99	382	156	613	255	995
8:00 am	48	243	50	248	98	491	8:00 pm	91	359	164	599	255	958
8:15 am	58	276	67	286	125	562	8:15 pm	102	335	150	565	252	900
8:30 am	81	278	65	289	146	567	8:30 pm	90	315	143	537	233	852
8:45 am	56	281	66	316	122	597	8:45 pm	76	300	142	514	218	814
9:00 am	81	320	88	348	169	668	9:00 pm	67	282	130	462	197	744
9:15 am	60	354	70	370	130	724	9:15 pm	82	257	122	410	204	667
9:30 am	84	402	92	412	176	814	9:30 pm	75	229	120	376	195	605
9:45 am	95	424	98	458	193	882	9:45 pm	58	194	90	323	148	517
10:00 am	115	466	110	506	225	972	10:00 pm	42	174	78	311	120	485
10:15 am	108	469	112	526	220	995	10:15 pm	54	173	88	277	142	450
10:30 am	106	479	138	534	244	1013	10:30 pm	40	152	67	247	107	399
10:45 am	137	481	146	548	283	1029	10:45 pm	38	146	78	222	116	368
11:00 am	118	472	130	542	248	1014	11:00 pm	41	127	44	176	85	303
11:15 am	118	486	120	558	238	1044	11:15 pm	33		58		91	
11:30 am	108	496	152	602	260	1098	11:30 pm	34		42		76	
11:45 am	128	520	140	598	268	1118	11:45 pm	19		32		51	

24 Hour Direction	Volume	AM Peak Hour Time	Volume	PM Peak Hour Time	Volume
Total	16264	11:45 am	1118	5:15 pm	1205
N/B	6956	11:45 am	520	3:30 pm	530
S/B	9308	11:30 am	602	5:45 pm	705

Run Date: *08/25/2010*

Run Time: *9:13 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1H9-1I2
Page: 1

Count Date: 08/21/2010 12:00 am Saturday   Condition: :   Location: TAHITI WAY E/O VIA MARINA

Align Coord:

Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour	Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour
12:00 am	11	34	6	17	17	51	12:00 pm	26	117	20	88	46	205
12:15 am	8	32	4	16	12	48	12:15 pm	27	117	22	91	49	208
12:30 am	8	33	3	15	11	48	12:30 pm	30	128	24	91	54	219
12:45 am	7	30	4	12	11	42	12:45 pm	34	126	22	101	56	227
1:00 am	9	30	5	10	14	40	1:00 pm	26	116	23	107	49	223
1:15 am	9	29	3	6	12	35	1:15 pm	38	118	22	114	60	232
1:30 am	5	27	0	7	5	34	1:30 pm	28	121	34	124	62	245
1:45 am	7	24	2	9	9	33	1:45 pm	24	123	28	124	52	247
2:00 am	8	20	1	8	9	28	2:00 pm	28	122	30	121	58	243
2:15 am	7	16	4	7	11	23	2:15 pm	41	116	32	112	73	228
2:30 am	2	14	2	4	4	18	2:30 pm	30	110	34	108	64	218
2:45 am	3	15	1	2	4	17	2:45 pm	23	122	25	106	48	228
3:00 am	4	13	0	3	4	16	3:00 pm	22	123	21	104	43	227
3:15 am	5	9	1	5	6	14	3:15 pm	35	135	28	113	63	248
3:30 am	3	5	0	5	3	10	3:30 pm	42	117	32	112	74	229
3:45 am	1	3	2	6	3	9	3:45 pm	24	101	23	111	47	212
4:00 am	0	2	2	7	2	9	4:00 pm	34	110	30	105	64	215
4:15 am	1	4	1	6	2	10	4:15 pm	17	98	27	109	44	207
4:30 am	1	6	1	6	2	12	4:30 pm	26	108	31	105	57	213
4:45 am	0	6	3	10	3	16	4:45 pm	33	107	17	108	50	215
5:00 am	2	6	1	9	3	15	5:00 pm	22	102	34	120	56	222
5:15 am	3	5	1	11	4	16	5:15 pm	27	116	23	116	50	232
5:30 am	1	4	5	17	6	21	5:30 pm	25	118	34	125	59	243
5:45 am	0	5	2	17	2	22	5:45 pm	28	116	29	128	57	244
6:00 am	1	9	3	22	4	31	6:00 pm	36	120	30	122	66	242
6:15 am	2	16	7	32	9	48	6:15 pm	29	114	32	112	61	226
6:30 am	2	24	5	40	7	64	6:30 pm	23	118	37	114	60	232
6:45 am	4	25	7	45	11	70	6:45 pm	32	111	23	103	55	214
7:00 am	8	30	13	47	21	77	7:00 pm	30	106	20	104	50	210
7:15 am	10	33	15	46	25	79	7:15 pm	33	97	34	99	67	196
7:30 am	3	36	10	51	13	87	7:30 pm	16	90	26	80	42	170
7:45 am	9	45	9	60	18	105	7:45 pm	27	102	24	67	51	169
8:00 am	11	50	12	69	23	119	8:00 pm	21	95	15	53	36	148
8:15 am	13	47	20	79	33	126	8:15 pm	26	95	15	48	41	143
8:30 am	12	48	19	77	31	125	8:30 pm	28	92	13	44	41	136
8:45 am	14	52	18	83	32	135	8:45 pm	20	82	10	42	30	124
9:00 am	8	58	22	91	30	149	9:00 pm	21	80	10	56	31	136
9:15 am	14	70	18	90	32	160	9:15 pm	23	80	11	54	34	134
9:30 am	16	80	25	105	41	185	9:30 pm	18	78	11	56	29	134
9:45 am	20	89	26	103	46	192	9:45 pm	18	76	24	53	42	129
10:00 am	20	94	21	109	41	203	10:00 pm	21	68	8	39	29	107
10:15 am	24	102	33	119	57	221	10:15 pm	21	59	13	36	34	95
10:30 am	25	112	23	108	48	220	10:30 pm	16	48	8	33	24	81
10:45 am	25	107	32	115	57	222	10:45 pm	10	45	10	36	20	81
11:00 am	28	105	31	110	59	215	11:00 pm	12	53	5	33	17	86
11:15 am	34	103	22	99	56	202	11:15 pm	10		10		20	
11:30 am	20	96	30	99	50	195	11:30 pm	13		11		24	
11:45 am	23	106	27	93	50	199	11:45 pm	18		7		25	

24 Hour Direction	Volume	AM Peak Hour Time	Volume	PM Peak Hour Time	Volume
Total	3217	10:45 am	222	3:15 pm	248
E/B	1663	10:30 am	112	3:15 pm	135
W/B	1554	10:15 am	119	5:45 pm	128

Run Date: *08/25/2010*

Run Time: *9:13 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1H9-1I2

Page: 1

Count Date: 08/22/2010 12:00 am Sunday   Condition: :   Location: TAHITI WAY E/O VIA MARINA

Align Coord:

Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour	Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour
12:00 am	8	43	7	33	15	76	12:00 pm	25	111	19	107	44	218
12:15 am	5	39	8	31	13	70	12:15 pm	38	127	42	104	80	231
12:30 am	16	41	9	23	25	64	12:30 pm	24	128	26	93	50	221
12:45 am	14	31	9	16	23	47	12:45 pm	24	129	20	79	44	208
1:00 am	4	21	5	9	9	30	1:00 pm	41	139	16	85	57	224
1:15 am	7	21	0	5	7	26	1:15 pm	39	132	31	96	70	228
1:30 am	6	18	2	5	8	23	1:30 pm	25	118	12	89	37	207
1:45 am	4	15	2	4	6	19	1:45 pm	34	121	26	111	60	232
2:00 am	4	17	1	5	5	22	2:00 pm	34	128	27	105	61	233
2:15 am	4	15	0	4	4	19	2:15 pm	25	124	24	110	49	234
2:30 am	3	13	1	7	4	20	2:30 pm	28	125	34	102	62	227
2:45 am	6	10	3	9	9	19	2:45 pm	41	120	20	102	61	222
3:00 am	2	5	0	6	2	11	3:00 pm	30	100	32	103	62	203
3:15 am	2	6	3	8	5	14	3:15 pm	26	92	16	102	42	194
3:30 am	0	5	3	6	3	11	3:30 pm	23	100	34	115	57	215
3:45 am	1	7	0	5	1	12	3:45 pm	21	103	21	110	42	213
4:00 am	3	7	2	6	5	13	4:00 pm	22	112	31	115	53	227
4:15 am	1	5	1	6	2	11	4:15 pm	34	122	29	107	63	229
4:30 am	2	5	2	7	4	12	4:30 pm	26	114	29	113	55	227
4:45 am	1	5	1	6	2	11	4:45 pm	30	111	26	117	56	228
5:00 am	1	5	2	6	3	11	5:00 pm	32	113	23	117	55	230
5:15 am	1	6	2	7	3	13	5:15 pm	26	114	35	132	61	246
5:30 am	2	7	1	10	3	17	5:30 pm	23	114	33	130	56	244
5:45 am	1	13	1	15	2	28	5:45 pm	32	125	26	128	58	253
6:00 am	2	20	3	23	5	43	6:00 pm	33	127	38	137	71	264
6:15 am	2	22	5	31	7	53	6:15 pm	26	125	33	120	59	245
6:30 am	8	23	6	35	14	58	6:30 pm	34	117	31	103	65	220
6:45 am	8	22	9	42	17	64	6:45 pm	34	99	35	94	69	193
7:00 am	4	18	11	40	15	58	7:00 pm	31	90	21	77	52	167
7:15 am	3	27	9	41	12	68	7:15 pm	18	81	16	75	34	156
7:30 am	7	35	13	47	20	82	7:30 pm	16	85	22	99	38	184
7:45 am	4	37	7	49	11	86	7:45 pm	25	93	18	91	43	184
8:00 am	13	43	12	51	25	94	8:00 pm	22	85	19	88	41	173
8:15 am	11	42	15	57	26	99	8:15 pm	22	87	40	86	62	173
8:30 am	9	42	15	56	24	98	8:30 pm	24	85	14	63	38	148
8:45 am	10	41	9	60	19	101	8:45 pm	17	79	15	64	32	143
9:00 am	12	46	18	74	30	120	9:00 pm	24	85	17	61	41	146
9:15 am	11	47	14	84	25	131	9:15 pm	20	79	17	47	37	126
9:30 am	8	56	19	84	27	140	9:30 pm	18	79	15	34	33	113
9:45 am	15	61	23	90	38	151	9:45 pm	23	69	12	28	35	97
10:00 am	13	70	28	96	41	166	10:00 pm	18	66	3	20	21	86
10:15 am	20	70	14	101	34	171	10:15 pm	20	58	4	20	24	78
10:30 am	13	78	25	111	38	189	10:30 pm	8	47	9	18	17	65
10:45 am	24	91	29	100	53	191	10:45 pm	20	55	4	13	24	68
11:00 am	13	90	33	93	46	183	11:00 pm	10	42	3	12	13	54
11:15 am	28	102	24	79	52	181	11:15 pm	9		2		11	
11:30 am	26	112	14	97	40	209	11:30 pm	16		4		20	
11:45 am	23	110	22	109	45	219	11:45 pm	7		3		10	

24 Hour Direction	24 Hour Volume	AM Peak Hour Time	AM Peak Hour Volume	PM Peak Hour Time	PM Peak Hour Volume
Total	3052	11:45 am	219	6:00 pm	264
E/B	1583	11:30 am	112	1:00 pm	139
W/B	1469	10:30 am	111	6:00 pm	137

Run Date: *08/25/2010*
Run Time: *9:13 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1I71J0
Page: 1

Count Date: 08/21/2010 12:00 am Saturday   Condition: :   Location: VIA MARINA N/O TAHITI WAY
Align Coord:

	N/B		S/B		Total			N/B		S/B		Total	
Time	15'	Hour	15'	Hour	15'	Hour	Time	15'	Hour	15'	Hour	15'	Hour
12:00 am	22	90	48	172	70	262	12:00 pm	127	508	140	656	267	1164
12:15 am	32	90	51	159	83	249	12:15 pm	135	505	135	729	270	1234
12:30 am	13	63	37	133	50	196	12:30 pm	118	498	180	760	298	1258
12:45 am	23	62	36	126	59	188	12:45 pm	128	494	201	750	329	1244
1:00 am	22	52	35	118	57	170	1:00 pm	124	508	213	763	337	1271
1:15 am	5	38	25	111	30	149	1:15 pm	128	499	166	721	294	1220
1:30 am	12	52	30	114	42	166	1:30 pm	114	507	170	785	284	1292
1:45 am	13	45	28	92	41	137	1:45 pm	142	525	214	801	356	1326
2:00 am	8	36	28	75	36	111	2:00 pm	115	501	171	798	286	1299
2:15 am	19	34	28	55	47	89	2:15 pm	136	498	230	845	366	1343
2:30 am	5	20	8	38	13	58	2:30 pm	132	509	186	849	318	1358
2:45 am	4	15	11	42	15	57	2:45 pm	118	510	211	885	329	1395
3:00 am	6	18	8	36	14	54	3:00 pm	112	510	218	879	330	1389
3:15 am	5	17	11	33	16	50	3:15 pm	147	538	234	857	381	1395
3:30 am	0	18	12	26	12	44	3:30 pm	133	482	222	803	355	1285
3:45 am	7	22	5	17	12	39	3:45 pm	118	483	205	767	323	1250
4:00 am	5	20	5	17	10	37	4:00 pm	140	503	196	770	336	1273
4:15 am	6	20	4	22	10	42	4:15 pm	91	496	180	758	271	1254
4:30 am	4	22	3	24	7	46	4:30 pm	134	527	186	780	320	1307
4:45 am	5	27	5	26	10	53	4:45 pm	138	511	208	772	346	1283
5:00 am	5	33	10	24	15	57	5:00 pm	133	503	184	722	317	1225
5:15 am	8	41	6	25	14	66	5:15 pm	122	513	202	756	324	1269
5:30 am	9	53	5	32	14	85	5:30 pm	118	535	178	724	296	1259
5:45 am	11	69	3	42	14	111	5:45 pm	130	559	158	724	288	1283
6:00 am	13	85	11	66	24	151	6:00 pm	143	554	218	750	361	1304
6:15 am	20	114	13	74	33	188	6:15 pm	144	511	170	747	314	1258
6:30 am	25	143	15	95	40	238	6:30 pm	142	488	178	746	320	1234
6:45 am	27	164	27	107	54	271	6:45 pm	125	468	184	753	309	1221
7:00 am	42	198	19	128	61	326	7:00 pm	100	439	215	723	315	1162
7:15 am	49	234	34	147	83	381	7:15 pm	121	451	169	672	290	1123
7:30 am	46	269	27	158	73	427	7:30 pm	122	413	185	679	307	1092
7:45 am	61	305	48	195	109	500	7:45 pm	96	372	154	688	250	1060
8:00 am	78	346	38	203	116	549	8:00 pm	112	331	164	656	276	987
8:15 am	84	363	45	229	129	592	8:15 pm	83	283	176	652	259	935
8:30 am	82	387	64	248	146	635	8:30 pm	81	272	194	611	275	883
8:45 am	102	407	56	249	158	656	8:45 pm	55	253	122	529	177	782
9:00 am	95	419	64	285	159	704	9:00 pm	64	272	160	535	224	807
9:15 am	108	434	64	302	172	736	9:15 pm	72	262	135	515	207	777
9:30 am	102	478	65	334	167	812	9:30 pm	62	245	112	521	174	766
9:45 am	114	508	92	369	206	877	9:45 pm	74	237	128	505	202	742
10:00 am	110	520	81	367	191	887	10:00 pm	54	214	140	460	194	674
10:15 am	152	548	96	392	248	940	10:15 pm	55	194	141	406	196	600
10:30 am	132	517	100	406	232	923	10:30 pm	54	186	96	348	150	534
10:45 am	126	527	90	422	216	949	10:45 pm	51	168	83	330	134	498
11:00 am	138	531	106	450	244	981	11:00 pm	34	147	86	327	120	474
11:15 am	121	520	110	484	231	1004	11:15 pm	47		83		130	
11:30 am	142	534	116	509	258	1043	11:30 pm	36		78		114	
11:45 am	130	510	118	573	248	1083	11:45 pm	30		80		110	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	17318	11:45 am	1083	2:45 pm	1395
N/B	7338	10:15 am	548	5:45 pm	559
S/B	9980	11:45 am	573	2:45 pm	885

Run Date: *08/25/2010*

Run Time: *9:13 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1I71J0

Page: 1

Count Date: 08/22/2010 12:00 am Sunday   Condition: :   Location: VIA MARINA N/O TAHITI WAY

Align Coord:

	N/B		S/B		Total			N/B		S/B		Total	
Time	15'	Hour	15'	Hour	15'	Hour	Time	15'	Hour	15'	Hour	15'	Hour
12:00 am	22	109	65	305	87	414	12:00 pm	117	533	212	824	329	1357
12:15 am	21	101	86	278	107	379	12:15 pm	137	532	199	822	336	1354
12:30 am	38	90	86	236	124	326	12:30 pm	126	537	225	875	351	1412
12:45 am	28	70	68	208	96	278	12:45 pm	153	517	188	860	341	1377
1:00 am	14	56	38	185	52	241	1:00 pm	116	503	210	910	326	1413
1:15 am	10	50	44	191	54	241	1:15 pm	142	499	252	950	394	1449
1:30 am	18	47	58	179	76	226	1:30 pm	106	485	210	906	316	1391
1:45 am	14	43	45	145	59	188	1:45 pm	139	501	238	931	377	1432
2:00 am	8	42	44	131	52	173	2:00 pm	112	487	250	941	362	1428
2:15 am	7	39	32	98	39	137	2:15 pm	128	509	208	899	336	1408
2:30 am	14	44	24	80	38	124	2:30 pm	122	507	235	924	357	1431
2:45 am	13	35	31	64	44	99	2:45 pm	125	512	248	925	373	1437
3:00 am	5	30	11	46	16	76	3:00 pm	134	513	208	916	342	1429
3:15 am	12	34	14	47	26	81	3:15 pm	126	507	233	877	359	1384
3:30 am	5	26	8	49	13	75	3:30 pm	127	516	236	854	363	1370
3:45 am	8	27	13	52	21	79	3:45 pm	126	542	239	828	365	1370
4:00 am	9	22	12	45	21	67	4:00 pm	128	545	169	799	297	1344
4:15 am	4	25	16	40	20	65	4:15 pm	135	565	210	844	345	1409
4:30 am	6	27	11	34	17	61	4:30 pm	153	572	210	812	363	1384
4:45 am	3	31	6	33	9	64	4:45 pm	129	541	210	774	339	1315
5:00 am	12	39	7	35	19	74	5:00 pm	148	550	214	786	362	1336
5:15 am	6	39	10	40	16	79	5:15 pm	142	566	178	774	320	1340
5:30 am	10	51	10	44	20	95	5:30 pm	122	574	172	752	294	1326
5:45 am	11	59	8	67	19	126	5:45 pm	138	582	222	784	360	1366
6:00 am	12	70	12	94	24	164	6:00 pm	164	582	202	770	366	1352
6:15 am	18	96	14	113	32	209	6:15 pm	150	549	156	738	306	1287
6:30 am	18	105	33	133	51	238	6:30 pm	130	506	204	774	334	1280
6:45 am	22	128	35	140	57	268	6:45 pm	138	492	208	762	346	1254
7:00 am	38	151	31	165	69	316	7:00 pm	131	469	170	704	301	1173
7:15 am	27	171	34	196	61	367	7:15 pm	107	448	192	708	299	1156
7:30 am	41	198	40	224	81	422	7:30 pm	116	447	192	686	308	1133
7:45 am	45	225	60	254	105	479	7:45 pm	115	405	150	620	265	1025
8:00 am	58	262	62	254	120	516	8:00 pm	110	357	174	618	284	975
8:15 am	54	272	62	268	116	540	8:15 pm	106	312	170	622	276	934
8:30 am	68	285	70	280	138	565	8:30 pm	74	284	126	591	200	875
8:45 am	82	315	60	284	142	599	8:45 pm	67	262	148	603	215	865
9:00 am	68	344	76	328	144	672	9:00 pm	65	245	178	577	243	822
9:15 am	67	396	74	360	141	756	9:15 pm	78	228	139	493	217	721
9:30 am	98	429	74	408	172	837	9:30 pm	52	182	138	480	190	662
9:45 am	111	447	104	517	215	964	9:45 pm	50	161	122	428	172	589
10:00 am	120	468	108	573	228	1041	10:00 pm	48	144	94	420	142	564
10:15 am	100	488	122	619	222	1107	10:15 pm	32	124	126	390	158	514
10:30 am	116	532	183	643	299	1175	10:30 pm	31	119	86	312	117	431
10:45 am	132	530	160	659	292	1189	10:45 pm	33	107	114	288	147	395
11:00 am	140	520	154	669	294	1189	11:00 pm	28	90	64	220	92	310
11:15 am	144	497	146	727	290	1224	11:15 pm	27		48		75	
11:30 am	114	490	199	780	313	1270	11:30 pm	19		62		81	
11:45 am	122	502	170	806	292	1308	11:45 pm	16		46		62	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	18446	11:45 am	1308	1:15 pm	1449
N/B	7131	10:30 am	532	5:45 pm	582
S/B	11315	11:45 am	806	1:15 pm	950

Run Date: *08/25/2010*
Run Time: *9:15 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1J5-1J8
Page: 1

Count Date: 08/21/2010 12:00 am Saturday **Condition:** : **Location:** VIA MARINA S/O PANAY WAY
Align Coord:

Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour	Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour
12:00 am	30	112	62	213	92	325	12:00 pm	167	742	186	702	353	1444
12:15 am	33	107	58	195	91	302	12:15 pm	189	740	182	696	371	1436
12:30 am	20	82	46	167	66	249	12:30 pm	185	725	158	672	343	1397
12:45 am	29	78	47	158	76	236	12:45 pm	201	716	176	682	377	1398
1:00 am	25	62	44	150	69	212	1:00 pm	165	715	180	692	345	1407
1:15 am	8	53	30	138	38	191	1:15 pm	174	716	158	675	332	1391
1:30 am	16	65	37	132	53	197	1:30 pm	176	722	168	705	344	1427
1:45 am	13	58	39	105	52	163	1:45 pm	200	731	186	694	386	1425
2:00 am	16	52	32	82	48	134	2:00 pm	166	695	163	683	329	1378
2:15 am	20	45	24	63	44	108	2:15 pm	180	700	188	718	368	1418
2:30 am	9	33	10	57	19	90	2:30 pm	185	718	157	763	342	1481
2:45 am	7	27	16	59	23	86	2:45 pm	164	717	175	772	339	1489
3:00 am	9	29	13	51	22	80	3:00 pm	171	715	198	783	369	1498
3:15 am	8	28	18	44	26	72	3:15 pm	198	758	233	734	431	1492
3:30 am	3	27	12	34	15	61	3:30 pm	184	709	166	659	350	1368
3:45 am	9	30	8	28	17	58	3:45 pm	162	708	186	653	348	1361
4:00 am	8	31	6	26	14	57	4:00 pm	214	747	149	646	363	1393
4:15 am	7	32	8	30	15	62	4:15 pm	149	737	158	645	307	1382
4:30 am	6	41	6	29	12	70	4:30 pm	183	759	160	637	343	1396
4:45 am	10	48	6	30	16	78	4:45 pm	201	754	179	631	380	1385
5:00 am	9	56	10	36	19	92	5:00 pm	204	725	148	608	352	1333
5:15 am	16	73	7	46	23	119	5:15 pm	171	735	150	630	321	1365
5:30 am	13	81	7	56	20	137	5:30 pm	178	768	154	642	332	1410
5:45 am	18	100	12	66	30	166	5:45 pm	172	790	156	632	328	1422
6:00 am	26	124	20	82	46	206	6:00 pm	214	793	170	644	384	1437
6:15 am	24	146	17	96	41	242	6:15 pm	204	734	162	643	366	1377
6:30 am	32	198	17	119	49	317	6:30 pm	200	700	144	630	344	1330
6:45 am	42	237	28	144	70	381	6:45 pm	175	662	168	640	343	1302
7:00 am	48	281	34	187	82	468	7:00 pm	155	631	169	596	324	1227
7:15 am	76	329	40	205	116	534	7:15 pm	170	628	149	565	319	1193
7:30 am	71	369	42	229	113	598	7:30 pm	162	580	154	570	316	1150
7:45 am	86	432	71	261	157	693	7:45 pm	144	536	124	560	268	1096
8:00 am	96	504	52	274	148	778	8:00 pm	152	473	138	564	290	1037
8:15 am	116	542	64	329	180	871	8:15 pm	122	425	154	538	276	963
8:30 am	134	582	74	345	208	927	8:30 pm	118	414	144	502	262	916
8:45 am	158	596	84	364	242	960	8:45 pm	81	390	128	461	209	851
9:00 am	134	606	107	392	241	998	9:00 pm	104	399	112	445	216	844
9:15 am	156	647	80	401	236	1048	9:15 pm	111	383	118	449	229	832
9:30 am	148	697	93	462	241	1159	9:30 pm	94	345	103	435	197	780
9:45 am	168	728	112	501	280	1229	9:45 pm	90	333	112	418	202	751
10:00 am	175	753	116	525	291	1278	10:00 pm	88	307	116	375	204	682
10:15 am	206	770	141	543	347	1313	10:15 pm	73	266	104	347	177	613
10:30 am	179	734	132	536	311	1270	10:30 pm	82	260	86	311	168	571
10:45 am	193	747	136	563	329	1310	10:45 pm	64	225	69	305	133	530
11:00 am	192	735	134	566	326	1301	11:00 pm	47	200	88	292	135	492
11:15 am	170	710	134	618	304	1328	11:15 pm	67		68		135	
11:30 am	192	729	159	666	351	1395	11:30 pm	47		80		127	
11:45 am	181	722	139	665	320	1387	11:45 pm	39		56		95	

24 Hour Direction	24 Hour Volume	AM Peak Hour Time	AM Peak Hour Volume	PM Peak Hour Time	PM Peak Hour Volume
Total	20101	11:30 am	1395	3:00 pm	1498
N/B	10487	10:15 am	770	6:00 pm	793
S/B	9614	11:30 am	666	3:00 pm	783

Run Date: *08/25/2010*

Run Time: *9:15 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1J5-1J8

Page: 1

Count Date: 08/22/2010 12:00 am Sunday   Condition: :   Location: VIA MARINA S/O PANAY WAY

Align Coord:

Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour	Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour
12:00 am	32	139	64	239	96	378	12:00 pm	158	700	194	728	352	1428
12:15 am	27	127	65	213	92	340	12:15 pm	182	696	170	707	352	1403
12:30 am	48	116	68	183	116	299	12:30 pm	170	706	190	747	360	1453
12:45 am	32	94	42	153	74	247	12:45 pm	190	690	174	747	364	1437
1:00 am	20	79	38	147	58	226	1:00 pm	154	666	173	783	327	1449
1:15 am	16	77	35	147	51	224	1:15 pm	192	679	210	815	402	1494
1:30 am	26	78	38	140	64	218	1:30 pm	154	665	190	781	344	1446
1:45 am	17	68	36	127	53	195	1:45 pm	166	677	210	779	376	1456
2:00 am	18	64	38	110	56	174	2:00 pm	167	703	205	755	372	1458
2:15 am	17	54	28	85	45	139	2:15 pm	178	719	176	743	354	1462
2:30 am	16	55	25	66	41	121	2:30 pm	166	720	188	755	354	1475
2:45 am	13	43	19	53	32	96	2:45 pm	192	735	186	762	378	1497
3:00 am	8	40	13	44	21	84	3:00 pm	183	709	193	744	376	1453
3:15 am	18	43	9	41	27	84	3:15 pm	179	706	188	714	367	1420
3:30 am	4	28	12	42	16	70	3:30 pm	181	713	195	697	376	1410
3:45 am	10	32	10	37	20	69	3:45 pm	166	740	168	677	334	1417
4:00 am	11	29	10	35	21	64	4:00 pm	180	751	163	661	343	1412
4:15 am	3	36	10	28	13	64	4:15 pm	186	763	171	682	357	1445
4:30 am	8	45	7	27	15	72	4:30 pm	208	777	175	662	383	1439
4:45 am	7	50	8	28	15	78	4:45 pm	177	743	152	622	329	1365
5:00 am	18	57	3	28	21	85	5:00 pm	192	761	184	629	376	1390
5:15 am	12	55	9	37	21	92	5:15 pm	200	787	151	585	351	1372
5:30 am	13	65	8	36	21	101	5:30 pm	174	795	135	560	309	1355
5:45 am	14	74	8	51	22	125	5:45 pm	195	791	159	570	354	1361
6:00 am	16	97	12	66	28	163	6:00 pm	218	786	140	573	358	1359
6:15 am	22	119	8	80	30	199	6:15 pm	208	751	126	571	334	1322
6:30 am	22	134	23	101	45	235	6:30 pm	170	695	145	583	315	1278
6:45 am	37	166	23	108	60	274	6:45 pm	190	671	162	600	352	1271
7:00 am	38	184	26	135	64	319	7:00 pm	183	635	138	570	321	1205
7:15 am	37	223	29	164	66	387	7:15 pm	152	610	138	557	290	1167
7:30 am	54	276	30	189	84	465	7:30 pm	146	602	162	537	308	1139
7:45 am	55	322	50	223	105	545	7:45 pm	154	559	132	508	286	1067
8:00 am	77	373	55	232	132	605	8:00 pm	158	512	125	509	283	1021
8:15 am	90	390	54	249	144	639	8:15 pm	144	436	118	512	262	948
8:30 am	100	404	64	260	164	664	8:30 pm	103	407	133	507	236	914
8:45 am	106	440	59	273	165	713	8:45 pm	107	388	133	504	240	892
9:00 am	94	497	72	325	166	822	9:00 pm	82	347	128	465	210	812
9:15 am	104	557	65	345	169	902	9:15 pm	115	331	113	419	228	750
9:30 am	136	603	77	404	213	1007	9:30 pm	84	266	130	396	214	662
9:45 am	163	639	111	479	274	1118	9:45 pm	66	227	94	340	160	567
10:00 am	154	668	92	497	246	1165	10:00 pm	66	209	82	330	148	539
10:15 am	150	700	124	535	274	1235	10:15 pm	50	182	90	300	140	482
10:30 am	172	735	152	543	324	1278	10:30 pm	45	172	74	258	119	430
10:45 am	192	749	129	557	321	1306	10:45 pm	48	157	84	232	132	389
11:00 am	186	732	130	592	316	1324	11:00 pm	39	133	52	182	91	315
11:15 am	185	704	132	656	317	1360	11:15 pm	40		48		88	
11:30 am	186	701	166	694	352	1395	11:30 pm	30		48		78	
11:45 am	175	685	164	718	339	1403	11:45 pm	24		34		58	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	19250	11:45 am	1403	2:45 pm	1497
N/B	9871	10:45 am	749	5:30 pm	795
S/B	9379	11:45 am	718	1:15 pm	815

Run Date: *08/25/2010*

Run Time: *9:12 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1J1-1J4

Page: 1

Count Date: 08/21/2010 12:00 am Saturday   Condition: :   Location: VIA MARINA S/O ADMIRALTY WAY

Align Coord:

Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour	Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour
12:00 am	56	217	82	298	138	515	12:00 pm	243	1012	273	969	516	1981
12:15 am	66	205	80	276	146	481	12:15 pm	269	1007	252	958	521	1965
12:30 am	44	166	66	240	110	406	12:30 pm	250	982	218	944	468	1926
12:45 am	51	153	70	220	121	373	12:45 pm	250	1004	226	966	476	1970
1:00 am	44	126	60	198	104	324	1:00 pm	238	1006	262	988	500	1994
1:15 am	27	98	44	181	71	279	1:15 pm	244	1018	238	956	482	1974
1:30 am	31	101	46	175	77	276	1:30 pm	272	1022	240	990	512	2012
1:45 am	24	85	48	155	72	240	1:45 pm	252	1020	248	974	500	1994
2:00 am	16	75	43	133	59	208	2:00 pm	250	1022	230	970	480	1992
2:15 am	30	76	38	114	68	190	2:15 pm	248	1050	272	1015	520	2065
2:30 am	15	64	26	100	41	164	2:30 pm	270	1070	224	1027	494	2097
2:45 am	14	59	26	91	40	150	2:45 pm	254	1074	244	1045	498	2119
3:00 am	17	58	24	75	41	133	3:00 pm	278	1058	275	1047	553	2105
3:15 am	18	53	24	59	42	112	3:15 pm	268	1072	284	990	552	2062
3:30 am	10	45	17	46	27	91	3:30 pm	274	1043	242	936	516	1979
3:45 am	13	45	10	41	23	86	3:45 pm	238	1038	246	924	484	1962
4:00 am	12	51	8	47	20	98	4:00 pm	292	1074	218	933	510	2007
4:15 am	10	54	11	57	21	111	4:15 pm	239	1084	230	932	469	2016
4:30 am	10	63	12	54	22	117	4:30 pm	269	1139	230	924	499	2063
4:45 am	19	73	16	55	35	128	4:45 pm	274	1140	255	910	529	2050
5:00 am	15	77	18	60	33	137	5:00 pm	302	1124	217	879	519	2003
5:15 am	19	97	8	66	27	163	5:15 pm	294	1117	222	896	516	2013
5:30 am	20	120	13	85	33	205	5:30 pm	270	1109	216	903	486	2012
5:45 am	23	146	21	111	44	257	5:45 pm	258	1127	224	915	482	2042
6:00 am	35	176	24	128	59	304	6:00 pm	295	1143	234	926	529	2069
6:15 am	42	213	27	160	69	373	6:15 pm	286	1108	229	928	515	2036
6:30 am	46	267	39	191	85	458	6:30 pm	288	1088	228	896	516	1984
6:45 am	53	327	38	213	91	540	6:45 pm	274	1077	235	896	509	1973
7:00 am	72	388	56	270	128	658	7:00 pm	260	1058	236	863	496	1921
7:15 am	96	438	58	288	154	726	7:15 pm	266	1033	197	833	463	1866
7:30 am	106	512	61	333	167	845	7:30 pm	277	977	228	836	505	1813
7:45 am	114	600	95	370	209	970	7:45 pm	255	914	202	808	457	1722
8:00 am	122	697	74	379	196	1076	8:00 pm	235	825	206	794	441	1619
8:15 am	170	775	103	449	273	1224	8:15 pm	210	748	200	772	410	1520
8:30 am	194	806	98	464	292	1270	8:30 pm	214	706	200	748	414	1454
8:45 am	211	840	104	510	315	1350	8:45 pm	166	652	188	704	354	1356
9:00 am	200	891	144	572	344	1463	9:00 pm	158	622	184	676	342	1298
9:15 am	201	938	118	584	319	1522	9:15 pm	168	591	176	644	344	1235
9:30 am	228	1011	144	632	372	1643	9:30 pm	160	543	156	614	316	1157
9:45 am	262	1056	166	671	428	1727	9:45 pm	136	513	160	580	296	1093
10:00 am	247	1037	156	685	403	1722	10:00 pm	127	497	152	526	279	1023
10:15 am	274	1050	166	730	440	1780	10:15 pm	120	462	146	497	266	959
10:30 am	273	1041	183	760	456	1801	10:30 pm	130	443	122	435	252	878
10:45 am	243	1041	180	810	423	1851	10:45 pm	120	407	106	422	226	829
11:00 am	260	1026	201	852	461	1878	11:00 pm	92	359	123	404	215	763
11:15 am	265	1009	196	924	461	1933	11:15 pm	101		84		185	
11:30 am	273	1013	233	980	506	1993	11:30 pm	94		109		203	
11:45 am	228	990	222	965	450	1955	11:45 pm	72		88		160	

24 Hour Direction	24 Hour Volume	AM Peak Hour Time	AM Peak Hour Volume	PM Peak Hour Time	PM Peak Hour Volume
Total	29291	11:30 am	1993	2:45 pm	2119
N/B	15619	9:45 am	1056	6:00 pm	1143
S/B	13672	11:30 am	980	3:00 pm	1047

Run Date: *08/25/2010*

Run Time: *9:12 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1J1-1J4

Page: 1

Count Date: 08/22/2010 12:00 am Sunday   Condition: :   Location: VIA MARINA S/O ADMIRALTY WAY

Align Coord:

Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour
12:00 am	51	231	74	326	125	557
12:15 am	52	228	92	310	144	538
12:30 am	78	207	100	270	178	477
12:45 am	50	171	60	222	110	393
1:00 am	48	150	58	212	106	362
1:15 am	31	131	52	206	83	337
1:30 am	42	128	52	192	94	320
1:45 am	29	104	50	170	79	274
2:00 am	29	97	52	154	81	251
2:15 am	28	80	38	122	66	202
2:30 am	18	76	30	98	48	174
2:45 am	22	68	34	84	56	152
3:00 am	12	59	20	62	32	121
3:15 am	24	59	14	56	38	115
3:30 am	10	42	16	54	26	96
3:45 am	13	42	12	48	25	90
4:00 am	12	40	14	45	26	85
4:15 am	7	46	12	37	19	83
4:30 am	10	66	10	41	20	107
4:45 am	11	76	9	44	20	120
5:00 am	18	85	6	50	24	135
5:15 am	27	92	16	61	43	153
5:30 am	20	92	13	61	33	153
5:45 am	20	113	15	89	35	202
6:00 am	25	140	17	113	42	253
6:15 am	27	171	16	132	43	303
6:30 am	41	206	41	166	82	372
6:45 am	47	237	39	171	86	408
7:00 am	56	268	36	207	92	475
7:15 am	62	322	50	237	112	559
7:30 am	72	373	46	257	118	630
7:45 am	78	431	75	296	153	727
8:00 am	110	489	66	307	176	796
8:15 am	113	516	70	335	183	851
8:30 am	130	555	85	354	215	909
8:45 am	136	605	86	377	222	982
9:00 am	137	679	94	431	231	1110
9:15 am	152	762	89	493	241	1255
9:30 am	180	818	108	564	288	1382
9:45 am	210	884	140	648	350	1532
10:00 am	220	912	156	708	376	1620
10:15 am	208	934	160	737	368	1671
10:30 am	246	992	192	761	438	1753
10:45 am	238	987	200	798	438	1785
11:00 am	242	1001	185	827	427	1828
11:15 am	266	982	184	906	450	1888
11:30 am	241	954	229	951	470	1905
11:45 am	252	964	229	976	481	1940
12:00 pm	223	973	264	970	487	1943
12:15 pm	238	968	229	970	467	1938
12:30 pm	251	991	254	1035	505	2026
12:45 pm	261	975	223	1039	484	2014
1:00 pm	218	968	264	1098	482	2066
1:15 pm	261	986	294	1121	555	2107
1:30 pm	235	975	258	1091	493	2066
1:45 pm	254	968	282	1101	536	2069
2:00 pm	236	979	287	1081	523	2060
2:15 pm	250	1020	264	1048	514	2068
2:30 pm	228	1014	268	1046	496	2060
2:45 pm	265	1066	262	1034	527	2100
3:00 pm	277	1073	254	1025	531	2098
3:15 pm	244	1052	262	987	506	2039
3:30 pm	280	1114	256	991	536	2105
3:45 pm	272	1156	253	965	525	2121
4:00 pm	256	1168	216	935	472	2103
4:15 pm	306	1226	266	973	572	2199
4:30 pm	322	1212	230	925	552	2137
4:45 pm	284	1168	223	909	507	2077
5:00 pm	314	1178	254	908	568	2086
5:15 pm	292	1178	218	869	510	2047
5:30 pm	278	1196	214	847	492	2043
5:45 pm	294	1185	222	837	516	2022
6:00 pm	314	1156	215	843	529	1999
6:15 pm	310	1116	196	830	506	1946
6:30 pm	267	1044	204	823	471	1867
6:45 pm	265	987	228	830	493	1817
7:00 pm	274	973	202	797	476	1770
7:15 pm	238	925	189	779	427	1704
7:30 pm	210	919	211	778	421	1697
7:45 pm	251	885	195	743	446	1628
8:00 pm	226	808	184	735	410	1543
8:15 pm	232	714	188	719	420	1433
8:30 pm	176	632	176	693	352	1325
8:45 pm	174	584	187	679	361	1263
9:00 pm	132	521	168	620	300	1141
9:15 pm	150	495	162	581	312	1076
9:30 pm	128	436	162	537	290	973
9:45 pm	111	384	128	465	239	849
10:00 pm	106	353	129	447	235	800
10:15 pm	91	312	118	396	209	708
10:30 pm	76	279	90	352	166	631
10:45 pm	80	257	110	332	190	589
11:00 pm	65	217	78	272	143	489
11:15 pm	58		74		132	
11:30 pm	54		70		124	
11:45 pm	40		50		90	

24 Hour Direction	Volume	AM Peak Hour Time	AM Peak Hour Volume	PM Peak Hour Time	PM Peak Hour Volume
Total	27691	11:45 am	1940	4:15 pm	2199
N/B	14518	11:00 am	1001	4:15 pm	1226
S/B	13173	11:45 am	976	1:15 pm	1121

Run Date: *08/25/2010*

Run Time: *9:13 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1J9-1K2

Page: 1

Count Date: 08/21/2010 12:00 am Saturday   Condition: :   Location: VIA MARINA S/O TAHITI WAY

Align Coord:

Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour	Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour
12:00 am	18	77	43	137	61	214	12:00 pm	110	424	112	426	222	850
12:15 am	29	76	35	120	64	196	12:15 pm	113	410	122	416	235	826
12:30 am	14	53	34	105	48	158	12:30 pm	96	408	94	376	190	784
12:45 am	16	49	25	97	41	146	12:45 pm	105	400	98	380	203	780
1:00 am	17	46	26	90	43	136	1:00 pm	96	409	102	384	198	793
1:15 am	6	41	20	90	26	131	1:15 pm	111	397	82	378	193	775
1:30 am	10	43	26	84	36	127	1:30 pm	88	408	98	405	186	813
1:45 am	13	40	18	67	31	107	1:45 pm	114	418	102	396	216	814
2:00 am	12	33	26	57	38	90	2:00 pm	84	402	96	400	180	802
2:15 am	8	26	14	35	22	61	2:15 pm	122	413	109	424	231	837
2:30 am	7	21	9	29	16	50	2:30 pm	98	411	89	451	187	862
2:45 am	6	15	8	26	14	41	2:45 pm	98	421	106	463	204	884
3:00 am	5	14	4	23	9	37	3:00 pm	95	423	120	480	215	903
3:15 am	3	11	8	24	11	35	3:15 pm	120	429	136	440	256	869
3:30 am	1	12	6	18	7	30	3:30 pm	108	391	101	404	209	795
3:45 am	5	14	5	14	10	28	3:45 pm	100	385	123	406	223	791
4:00 am	2	15	5	15	7	30	4:00 pm	101	417	80	397	181	814
4:15 am	4	18	2	14	6	32	4:15 pm	82	426	100	417	182	843
4:30 am	3	22	2	16	5	38	4:30 pm	102	438	103	421	205	859
4:45 am	6	23	6	18	12	41	4:45 pm	132	427	114	410	246	837
5:00 am	5	27	4	16	9	43	5:00 pm	110	408	100	390	210	798
5:15 am	8	37	4	24	12	61	5:15 pm	94	404	104	396	198	800
5:30 am	4	40	4	29	8	69	5:30 pm	91	436	92	390	183	826
5:45 am	10	56	4	42	14	98	5:45 pm	113	455	94	399	207	854
6:00 am	15	66	12	58	27	124	6:00 pm	106	442	106	402	212	844
6:15 am	11	81	9	61	20	142	6:15 pm	126	416	98	406	224	822
6:30 am	20	109	17	74	37	183	6:30 pm	110	390	101	405	211	795
6:45 am	20	127	20	83	40	210	6:45 pm	100	370	97	415	197	785
7:00 am	30	161	15	104	45	265	7:00 pm	80	358	110	390	190	748
7:15 am	39	199	22	115	61	314	7:15 pm	100	360	97	368	197	728
7:30 am	38	226	26	127	64	353	7:30 pm	90	334	111	363	201	697
7:45 am	54	254	41	152	95	406	7:45 pm	88	310	72	343	160	653
8:00 am	68	290	26	167	94	457	8:00 pm	82	260	88	339	170	599
8:15 am	66	300	34	200	100	500	8:15 pm	74	238	92	320	166	558
8:30 am	66	324	51	206	117	530	8:30 pm	66	225	91	293	157	518
8:45 am	90	340	56	220	146	560	8:45 pm	38	210	68	262	106	472
9:00 am	78	338	59	228	137	566	9:00 pm	60	224	69	263	129	487
9:15 am	90	362	40	231	130	593	9:15 pm	61	209	65	262	126	471
9:30 am	82	388	65	271	147	659	9:30 pm	51	196	60	266	111	462
9:45 am	88	414	64	274	152	688	9:45 pm	52	189	69	256	121	445
10:00 am	102	430	62	296	164	726	10:00 pm	45	175	68	233	113	408
10:15 am	116	438	80	302	196	740	10:15 pm	48	155	69	209	117	364
10:30 am	108	423	68	305	176	728	10:30 pm	44	149	50	183	94	332
10:45 am	104	433	86	337	190	770	10:45 pm	38	133	46	171	84	304
11:00 am	110	441	68	341	178	782	11:00 pm	25	112	44	156	69	268
11:15 am	101	441	83	385	184	826	11:15 pm	42		43		85	
11:30 am	118	453	100	424	218	877	11:30 pm	28		38		66	
11:45 am	112	431	90	418	202	849	11:45 pm	17		31		48	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	11784	11:30 am	877	3:00 pm	903
N/B	5992	11:30 am	453	5:45 pm	455
S/B	5792	11:30 am	424	3:00 pm	480

Run Date: *08/25/2010*

Run Time: *9:13 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1J9-1K2
Page: 1

Count Date: 08/22/2010 12:00 am Sunday   Condition: :   Location: VIA MARINA S/O TAHITI WAY

Align Coord:

Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour	Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour
12:00 am	13	73	40	151	53	224	12:00 pm	94	446	106	445	200	891
12:15 am	23	68	56	135	79	203	12:15 pm	118	467	99	445	217	912
12:30 am	17	59	30	100	47	159	12:30 pm	120	474	124	470	244	944
12:45 am	20	56	25	102	45	158	12:45 pm	114	454	116	466	230	920
1:00 am	8	47	24	105	32	152	1:00 pm	115	464	106	482	221	946
1:15 am	14	47	21	103	35	150	1:15 pm	125	441	124	504	249	945
1:30 am	14	41	32	98	46	139	1:30 pm	100	424	120	499	220	923
1:45 am	11	38	28	79	39	117	1:45 pm	124	418	132	499	256	917
2:00 am	8	38	22	63	30	101	2:00 pm	92	415	128	493	220	908
2:15 am	8	33	16	45	24	78	2:15 pm	108	421	119	481	227	902
2:30 am	11	35	13	36	24	71	2:30 pm	94	424	120	504	214	928
2:45 am	11	25	12	31	23	56	2:45 pm	121	434	126	514	247	948
3:00 am	3	23	4	24	7	47	3:00 pm	98	423	116	521	214	944
3:15 am	10	25	7	28	17	53	3:15 pm	111	418	142	497	253	915
3:30 am	1	19	8	30	9	49	3:30 pm	104	423	130	454	234	877
3:45 am	9	23	5	26	14	49	3:45 pm	110	447	133	438	243	885
4:00 am	5	16	8	25	13	41	4:00 pm	93	448	92	403	185	851
4:15 am	4	18	9	19	13	37	4:15 pm	116	471	99	411	215	882
4:30 am	5	20	4	16	9	36	4:30 pm	128	466	114	410	242	876
4:45 am	2	24	4	16	6	40	4:45 pm	111	441	98	388	209	829
5:00 am	7	33	2	15	9	48	5:00 pm	116	459	100	406	216	865
5:15 am	6	33	6	19	12	52	5:15 pm	111	481	98	396	209	877
5:30 am	9	41	4	19	13	60	5:30 pm	103	490	92	386	195	876
5:45 am	11	44	3	28	14	72	5:45 pm	129	486	116	382	245	868
6:00 am	7	50	6	41	13	91	6:00 pm	138	467	90	374	228	841
6:15 am	14	65	6	52	20	117	6:15 pm	120	437	88	359	208	796
6:30 am	12	77	13	64	25	141	6:30 pm	99	407	88	367	187	774
6:45 am	17	89	16	69	33	158	6:45 pm	110	406	108	395	218	801
7:00 am	22	116	17	88	39	204	7:00 pm	108	392	75	365	183	757
7:15 am	26	140	18	103	44	243	7:15 pm	90	373	96	372	186	745
7:30 am	24	152	18	105	42	257	7:30 pm	98	349	116	359	214	708
7:45 am	44	192	35	128	79	320	7:45 pm	96	318	78	306	174	624
8:00 am	46	212	32	131	78	343	8:00 pm	89	274	82	306	171	580
8:15 am	38	220	20	143	58	363	8:15 pm	66	231	83	299	149	530
8:30 am	64	240	41	163	105	403	8:30 pm	67	222	63	287	130	509
8:45 am	64	260	38	166	102	426	8:45 pm	52	203	78	294	130	497
9:00 am	54	290	44	192	98	482	9:00 pm	46	187	75	266	121	453
9:15 am	58	325	40	201	98	526	9:15 pm	57	182	71	239	128	421
9:30 am	84	355	44	241	128	596	9:30 pm	48	152	70	225	118	377
9:45 am	94	365	64	285	158	650	9:45 pm	36	127	50	199	86	326
10:00 am	89	383	53	303	142	686	10:00 pm	41	121	48	201	89	322
10:15 am	88	409	80	328	168	737	10:15 pm	27	102	57	180	84	282
10:30 am	94	437	88	326	182	763	10:30 pm	23	101	44	145	67	246
10:45 am	112	451	82	348	194	799	10:45 pm	30	93	52	128	82	221
11:00 am	115	434	78	374	193	808	11:00 pm	22	71	27	96	49	167
11:15 am	116	413	78	402	194	815	11:15 pm	26		22		48	
11:30 am	108	415	110	423	218	838	11:30 pm	15		27		42	
11:45 am	95	427	108	437	203	864	11:45 pm	8		20		28	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	11752	11:45 am	864	2:45 pm	948
N/B	5882	10:45 am	451	5:30 pm	490
S/B	5870	11:45 am	437	3:00 pm	521

Run Date: *08/31/2010*
Run Time: *10:27 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1P4-1P7
Page: 1

Count Date: 08/28/2010 12:00 am Saturday   Condition: :   Location: ADMIRALTY WAY E/O PALAWAN WAY
Align Coord:

	E/B		W/B		Total			E/B		W/B		Total	
Time	15'	Hour	15'	Hour	15'	Hour	Time	15'	Hour	15'	Hour	15'	Hour
12:00 am	58	226	70	251	128	477	12:00 pm	228	972	265	1082	493	2054
12:15 am	61	227	72	222	133	449	12:15 pm	246	970	276	1107	522	2077
12:30 am	64	211	56	197	120	408	12:30 pm	246	987	259	1119	505	2106
12:45 am	43	183	53	179	96	362	12:45 pm	252	968	282	1144	534	2112
1:00 am	59	214	41	168	100	382	1:00 pm	226	966	290	1138	516	2104
1:15 am	45	215	47	167	92	382	1:15 pm	263	1006	288	1118	551	2124
1:30 am	36	210	38	150	74	360	1:30 pm	227	989	284	1094	511	2083
1:45 am	74	197	42	138	116	335	1:45 pm	250	1020	276	1114	526	2134
2:00 am	60	132	40	114	100	246	2:00 pm	266	1005	270	1160	536	2165
2:15 am	40	85	30	90	70	175	2:15 pm	246	979	264	1160	510	2139
2:30 am	23	56	26	70	49	126	2:30 pm	258	961	304	1206	562	2167
2:45 am	9	43	18	58	27	101	2:45 pm	235	959	322	1180	557	2139
3:00 am	13	39	16	48	29	87	3:00 pm	240	976	270	1144	510	2120
3:15 am	11	36	10	42	21	78	3:15 pm	228	1030	310	1142	538	2172
3:30 am	10	36	14	47	24	83	3:30 pm	256	1016	278	1122	534	2138
3:45 am	5	41	8	47	13	88	3:45 pm	252	1056	286	1154	538	2210
4:00 am	10	47	10	56	20	103	4:00 pm	294	1067	268	1156	562	2223
4:15 am	11	54	15	63	26	117	4:15 pm	214	1044	290	1193	504	2237
4:30 am	15	64	14	58	29	122	4:30 pm	296	1146	310	1189	606	2335
4:45 am	11	76	17	60	28	136	4:45 pm	263	1106	288	1129	551	2235
5:00 am	17	90	17	77	34	167	5:00 pm	271	1106	305	1097	576	2203
5:15 am	21	109	10	83	31	192	5:15 pm	316	1070	286	1052	602	2122
5:30 am	27	140	16	114	43	254	5:30 pm	256	1021	250	1008	506	2029
5:45 am	25	155	34	141	59	296	5:45 pm	263	1009	256	981	519	1990
6:00 am	36	188	23	150	59	338	6:00 pm	235	976	260	968	495	1944
6:15 am	52	201	41	171	93	372	6:15 pm	267	977	242	957	509	1934
6:30 am	42	215	43	180	85	395	6:30 pm	244	982	223	929	467	1911
6:45 am	58	245	43	213	101	458	6:45 pm	230	955	243	924	473	1879
7:00 am	49	301	44	258	93	559	7:00 pm	236	905	249	879	485	1784
7:15 am	66	368	50	304	116	672	7:15 pm	272	841	214	818	486	1659
7:30 am	72	442	76	380	148	822	7:30 pm	217	741	218	791	435	1532
7:45 am	114	508	88	437	202	945	7:45 pm	180	708	198	759	378	1467
8:00 am	116	558	90	482	206	1040	8:00 pm	172	679	188	763	360	1442
8:15 am	140	612	126	506	266	1118	8:15 pm	172	663	187	752	359	1415
8:30 am	138	690	133	541	271	1231	8:30 pm	184	637	186	732	370	1369
8:45 am	164	759	133	577	297	1336	8:45 pm	151	576	202	730	353	1306
9:00 am	170	819	114	652	284	1471	9:00 pm	156	582	177	700	333	1282
9:15 am	218	864	161	740	379	1604	9:15 pm	146	562	167	673	313	1235
9:30 am	207	876	169	765	376	1641	9:30 pm	123	527	184	670	307	1197
9:45 am	224	927	208	791	432	1718	9:45 pm	157	520	172	638	329	1158
10:00 am	215	945	202	771	417	1716	10:00 pm	136	467	150	606	286	1073
10:15 am	230	936	186	818	416	1754	10:15 pm	111	429	164	572	275	1001
10:30 am	258	963	195	854	453	1817	10:30 pm	116	409	152	499	268	908
10:45 am	242	940	188	952	430	1892	10:45 pm	104	381	140	431	244	812
11:00 am	206	939	249	1026	455	1965	11:00 pm	98	356	116	380	214	736
11:15 am	257	961	222	1042	479	2003	11:15 pm	91		91		182	
11:30 am	235	950	293	1096	528	2046	11:30 pm	88		84		172	
11:45 am	241	961	262	1062	503	2023	11:45 pm	79		89		168	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	29681	11:30 am	2046	4:30 pm	2335
E/B	14555	10:30 am	963	4:30 pm	1146
W/B	15126	11:30 am	1096	2:30 pm	1206

Run Date: *08/31/2010*

Run Time: *10:27 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1P4-1P7

Page: 1

Count Date: 08/29/2010 12:00 am Sunday   Condition: :   Location: ADMIRALTY WAY E/O PALAWAN WAY

Align Coord:

	E/B		W/B		Total			E/B		W/B		Total	
Time	15'	Hour	15'	Hour	15'	Hour	Time	15'	Hour	15'	Hour	15'	Hour
12:00 am	60	227	86	290	146	517	12:00 pm	244	937	234	1004	478	1941
12:15 am	62	215	86	255	148	470	12:15 pm	223	921	238	1026	461	1947
12:30 am	51	192	58	213	109	405	12:30 pm	242	934	270	1048	512	1982
12:45 am	54	191	60	193	114	384	12:45 pm	228	906	262	1051	490	1957
1:00 am	48	194	51	161	99	355	1:00 pm	228	914	256	1081	484	1995
1:15 am	39	191	44	150	83	341	1:15 pm	236	903	260	1109	496	2012
1:30 am	50	182	38	135	88	317	1:30 pm	214	907	273	1137	487	2044
1:45 am	57	160	28	121	85	281	1:45 pm	236	915	292	1144	528	2059
2:00 am	45	130	40	109	85	239	2:00 pm	217	933	284	1118	501	2051
2:15 am	30	92	29	94	59	186	2:15 pm	240	954	288	1107	528	2061
2:30 am	28	72	24	83	52	155	2:30 pm	222	973	280	1098	502	2071
2:45 am	27	57	16	74	43	131	2:45 pm	254	1015	266	1060	520	2075
3:00 am	7	41	25	70	32	111	3:00 pm	238	1016	273	1072	511	2088
3:15 am	10	45	18	57	28	102	3:15 pm	259	1044	279	1082	538	2126
3:30 am	13	42	15	55	28	97	3:30 pm	264	1033	242	1060	506	2093
3:45 am	11	40	12	50	23	90	3:45 pm	255	1045	278	1099	533	2144
4:00 am	11	42	12	52	23	94	4:00 pm	266	1041	283	1107	549	2148
4:15 am	7	46	16	56	23	102	4:15 pm	248	1065	257	1086	505	2151
4:30 am	11	57	10	56	21	113	4:30 pm	276	1077	281	1103	557	2180
4:45 am	13	76	14	67	27	143	4:45 pm	251	1081	286	1105	537	2186
5:00 am	15	93	16	78	31	171	5:00 pm	290	1142	262	1101	552	2243
5:15 am	18	109	16	87	34	196	5:15 pm	260	1149	274	1103	534	2252
5:30 am	30	130	21	97	51	227	5:30 pm	280	1165	283	1100	563	2265
5:45 am	30	141	25	110	55	251	5:45 pm	312	1145	282	1035	594	2180
6:00 am	31	156	25	128	56	284	6:00 pm	297	1052	264	1007	561	2059
6:15 am	39	189	26	145	65	334	6:15 pm	276	959	271	919	547	1878
6:30 am	41	210	34	165	75	375	6:30 pm	260	897	218	892	478	1789
6:45 am	45	235	43	190	88	425	6:45 pm	219	825	254	900	473	1725
7:00 am	64	272	42	217	106	489	7:00 pm	204	810	176	820	380	1630
7:15 am	60	305	46	241	106	546	7:15 pm	214	782	244	834	458	1616
7:30 am	66	325	59	271	125	596	7:30 pm	188	736	226	757	414	1493
7:45 am	82	370	70	304	152	674	7:45 pm	204	698	174	717	378	1415
8:00 am	97	443	66	338	163	781	8:00 pm	176	623	190	713	366	1336
8:15 am	80	491	76	383	156	874	8:15 pm	168	575	167	675	335	1250
8:30 am	111	555	92	433	203	988	8:30 pm	150	527	186	660	336	1187
8:45 am	155	610	104	467	259	1077	8:45 pm	129	481	170	602	299	1083
9:00 am	145	623	111	537	256	1160	9:00 pm	128	452	152	570	280	1022
9:15 am	144	658	126	574	270	1232	9:15 pm	120	404	152	518	272	922
9:30 am	166	728	126	620	292	1348	9:30 pm	104	378	128	461	232	839
9:45 am	168	746	174	666	342	1412	9:45 pm	100	365	138	418	238	783
10:00 am	180	800	148	672	328	1472	10:00 pm	80	317	100	364	180	681
10:15 am	214	844	172	726	386	1570	10:15 pm	94	307	95	339	189	646
10:30 am	184	860	172	780	356	1640	10:30 pm	91	283	85	312	176	595
10:45 am	222	898	180	878	402	1776	10:45 pm	52	254	84	287	136	541
11:00 am	224	906	202	915	426	1821	11:00 pm	70	249	75	261	145	510
11:15 am	230	926	226	947	456	1873	11:15 pm	70		68		138	
11:30 am	222	919	270	959	492	1878	11:30 pm	62		60		122	
11:45 am	230	939	217	959	447	1898	11:45 pm	47		58		105	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	27198	11:45 am	1898	5:30 pm	2265
E/B	13413	11:45 am	939	5:30 pm	1165
W/B	13785	11:30 am	959	1:45 pm	1144

Run Date: *08/31/2010*
Run Time: *10:26 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1Q2-1Q5
Page: 1

Count Date: 08/28/2010 12:00 am Saturday   Condition: :   Location: MINDANAO WAY E/O ADMIRALTY WAY
Align Coord:

	E/B		W/B		Total			E/B		W/B		Total	
Time	15'	Hour	15'	Hour	15'	Hour	Time	15'	Hour	15'	Hour	15'	Hour
12:00 am	54	189	48	150	102	339	12:00 pm	161	649	178	730	339	1379
12:15 am	52	164	44	122	96	286	12:15 pm	140	661	156	748	296	1409
12:30 am	45	144	34	99	79	243	12:30 pm	184	727	194	775	378	1502
12:45 am	38	119	24	85	62	204	12:45 pm	164	709	202	771	366	1480
1:00 am	29	101	20	80	49	181	1:00 pm	173	733	196	799	369	1532
1:15 am	32	102	21	77	53	179	1:15 pm	206	758	183	785	389	1543
1:30 am	20	98	20	72	40	170	1:30 pm	166	732	190	790	356	1522
1:45 am	20	90	19	70	39	160	1:45 pm	188	752	230	812	418	1564
2:00 am	30	76	17	68	47	144	2:00 pm	198	746	182	782	380	1528
2:15 am	28	56	16	70	44	126	2:15 pm	180	738	188	760	368	1498
2:30 am	12	36	18	60	30	96	2:30 pm	186	719	212	768	398	1487
2:45 am	6	32	17	47	23	79	2:45 pm	182	714	200	768	382	1482
3:00 am	10	34	19	40	29	74	3:00 pm	190	698	160	744	350	1442
3:15 am	8	38	6	28	14	66	3:15 pm	161	700	196	740	357	1440
3:30 am	8	34	5	36	13	70	3:30 pm	181	702	212	735	393	1437
3:45 am	8	31	10	43	18	74	3:45 pm	166	707	176	721	342	1428
4:00 am	14	29	7	48	21	77	4:00 pm	192	725	156	751	348	1476
4:15 am	4	30	14	61	18	91	4:15 pm	163	729	191	781	354	1510
4:30 am	5	37	12	57	17	94	4:30 pm	186	768	198	780	384	1548
4:45 am	6	49	15	65	21	114	4:45 pm	184	752	206	766	390	1518
5:00 am	15	61	20	82	35	143	5:00 pm	196	736	186	749	382	1485
5:15 am	11	60	10	92	21	152	5:15 pm	202	707	190	747	392	1454
5:30 am	17	73	20	116	37	189	5:30 pm	170	662	184	752	354	1414
5:45 am	18	82	32	151	50	233	5:45 pm	168	674	189	748	357	1422
6:00 am	14	100	30	189	44	289	6:00 pm	167	650	184	719	351	1369
6:15 am	24	118	34	222	58	340	6:15 pm	157	619	195	691	352	1310
6:30 am	26	134	55	250	81	384	6:30 pm	182	621	180	628	362	1249
6:45 am	36	144	70	287	106	431	6:45 pm	144	593	160	578	304	1171
7:00 am	32	164	63	326	95	490	7:00 pm	136	613	156	533	292	1146
7:15 am	40	186	62	354	102	540	7:15 pm	159	623	132	492	291	1115
7:30 am	36	218	92	400	128	618	7:30 pm	154	584	130	472	284	1056
7:45 am	56	268	109	400	165	668	7:45 pm	164	580	115	458	279	1038
8:00 am	54	295	91	415	145	710	8:00 pm	146	623	115	431	261	1054
8:15 am	72	344	108	422	180	766	8:15 pm	120	627	112	410	232	1037
8:30 am	86	370	92	442	178	812	8:30 pm	150	645	116	400	266	1045
8:45 am	83	401	124	481	207	882	8:45 pm	207	599	88	390	295	989
9:00 am	103	438	98	499	201	937	9:00 pm	150	504	94	398	244	902
9:15 am	98	463	128	548	226	1011	9:15 pm	138	471	102	386	240	857
9:30 am	117	485	131	556	248	1041	9:30 pm	104	431	106	368	210	799
9:45 am	120	512	142	580	262	1092	9:45 pm	112	422	96	338	208	760
10:00 am	128	528	147	594	275	1122	10:00 pm	117	389	82	318	199	707
10:15 am	120	524	136	603	256	1127	10:15 pm	98	361	84	284	182	645
10:30 am	144	558	155	629	299	1187	10:30 pm	95	322	76	244	171	566
10:45 am	136	563	156	658	292	1221	10:45 pm	79	288	76	231	155	519
11:00 am	124	559	156	680	280	1239	11:00 pm	89	279	48	203	137	482
11:15 am	154	596	162	702	316	1298	11:15 pm	59		44		103	
11:30 am	149	582	184	696	333	1278	11:30 pm	61		63		124	
11:45 am	132	617	178	706	310	1323	11:45 pm	70		48		118	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	20247	11:45 am	1323	1:45 pm	1564
E/B	9919	11:45 am	617	4:30 pm	768
W/B	10328	11:45 am	706	1:45 pm	812

Run Date: 08/31/2010

Run Time: 10:26 AM

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1Q2-1Q5

Page: 1

Count Date: 08/29/2010 12:00 am Sunday   Condition: :   Location: MINDANAO WAY E/O ADMIRALTY WAY

Align Coord:

Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour	Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour
12:00 am	46	160	48	166	94	326	12:00 pm	136	597	182	764	318	1361
12:15 am	46	146	46	145	92	291	12:15 pm	178	625	204	796	382	1421
12:30 am	30	120	40	118	70	238	12:30 pm	145	593	184	778	329	1371
12:45 am	38	111	32	95	70	206	12:45 pm	138	596	194	775	332	1371
1:00 am	32	101	27	86	59	187	1:00 pm	164	622	214	805	378	1427
1:15 am	20	105	19	78	39	183	1:15 pm	146	626	186	782	332	1408
1:30 am	21	102	17	80	38	182	1:30 pm	148	653	181	790	329	1443
1:45 am	28	103	23	78	51	181	1:45 pm	164	689	224	798	388	1487
2:00 am	36	88	19	64	55	152	2:00 pm	168	673	191	759	359	1432
2:15 am	17	60	21	61	38	121	2:15 pm	173	663	194	766	367	1429
2:30 am	22	48	15	53	37	101	2:30 pm	184	658	189	770	373	1428
2:45 am	13	29	9	48	22	77	2:45 pm	148	654	185	763	333	1417
3:00 am	8	20	16	45	24	65	3:00 pm	158	668	198	770	356	1438
3:15 am	5	16	13	38	18	54	3:15 pm	168	696	198	754	366	1450
3:30 am	3	13	10	38	13	51	3:30 pm	180	702	182	709	362	1411
3:45 am	4	16	6	40	10	56	3:45 pm	162	695	192	703	354	1398
4:00 am	4	18	9	45	13	63	4:00 pm	186	706	182	647	368	1353
4:15 am	2	22	13	50	15	72	4:15 pm	174	671	153	616	327	1287
4:30 am	6	34	12	55	18	89	4:30 pm	173	634	176	600	349	1234
4:45 am	6	44	11	63	17	107	4:45 pm	173	641	136	583	309	1224
5:00 am	8	50	14	80	22	130	5:00 pm	151	646	151	629	302	1275
5:15 am	14	55	18	94	32	149	5:15 pm	137	665	137	656	274	1321
5:30 am	16	61	20	110	36	171	5:30 pm	180	702	159	657	339	1359
5:45 am	12	71	28	126	40	197	5:45 pm	178	666	182	628	360	1294
6:00 am	13	85	28	143	41	228	6:00 pm	170	646	178	586	348	1232
6:15 am	20	96	34	159	54	255	6:15 pm	174	628	138	516	312	1144
6:30 am	26	107	36	166	62	273	6:30 pm	144	604	130	502	274	1106
6:45 am	26	125	45	185	71	310	6:45 pm	158	594	140	510	298	1104
7:00 am	24	143	44	202	68	345	7:00 pm	152	591	108	471	260	1062
7:15 am	31	183	41	225	72	408	7:15 pm	150	571	124	470	274	1041
7:30 am	44	202	55	250	99	452	7:30 pm	134	545	138	468	272	1013
7:45 am	44	217	62	266	106	483	7:45 pm	155	540	101	418	256	958
8:00 am	64	235	67	294	131	529	8:00 pm	132	493	107	391	239	884
8:15 am	50	243	66	297	116	540	8:15 pm	124	454	122	360	246	814
8:30 am	59	279	71	324	130	603	8:30 pm	129	432	88	333	217	765
8:45 am	62	319	90	355	152	674	8:45 pm	108	407	74	307	182	714
9:00 am	72	343	70	397	142	740	9:00 pm	93	381	76	314	169	695
9:15 am	86	363	93	441	179	804	9:15 pm	102	371	95	294	197	665
9:30 am	99	375	102	460	201	835	9:30 pm	104	335	62	258	166	593
9:45 am	86	406	132	498	218	904	9:45 pm	82	293	81	250	163	543
10:00 am	92	422	114	516	206	938	10:00 pm	83	260	56	221	139	481
10:15 am	98	454	112	564	210	1018	10:15 pm	66	231	59	207	125	438
10:30 am	130	464	140	604	270	1068	10:30 pm	62	211	54	190	116	401
10:45 am	102	430	150	690	252	1120	10:45 pm	49	182	52	165	101	347
11:00 am	124	462	162	719	286	1181	11:00 pm	54	159	42	143	96	302
11:15 am	108	474	152	739	260	1213	11:15 pm	46		42		88	
11:30 am	96	544	226	791	322	1335	11:30 pm	33		29		62	
11:45 am	134	593	179	749	313	1342	11:45 pm	26		30		56	

24 Hour Direction	24 Hour Volume	AM Peak Hour Time	AM Peak Hour Volume	PM Peak Hour Time	PM Peak Hour Volume
Total	17826	11:45 am	1342	1:45 pm	1487
E/B	8569	11:45 am	593	4:00 pm	706
W/B	9257	11:30 am	791	1:00 pm	805

APPENDIX C

SUMMARY OF TRAFFIC COUNTS FROM 2005 TO 2010 – FROM LACDPW

Run Date: *08/25/2010*
Run Time *07:19 AM*

Los Angeles County Department of Public Works
Machine Count Traffic Volumes

Location	Count Date	Day	Condition	Jur	Hwp	Direction	24 Hr Vol	AM Peak Began	AM Peak Hr Vol	PM Peak Began	PM Peak Hr Vol
ADMIRALTY WAY N/O FIJI WAY	08/10/2005	Wed		433	Major	Total	21738	08:45 AM	1529		
						North	10915	09:00 AM	870	05:30 PM	838
						South	10823	08:45 AM	663	05:45 PM	1105
ADMIRALTY WAY N/O FIJI WAY	08/11/2005	Thur		433	Major	Total	21614	08:45 AM	1481		
						North	10834	08:30 AM	846	06:00 PM	838
						South	10780	09:15 AM	643	05:45 PM	1200
ADMIRALTY WAY N/O FIJI WAY	08/12/2005	Fri		433	Major	Total	21914	09:00 AM	1409		
						North	10906	09:00 AM	784	12:45 PM	877
						South	11008	08:45 AM	630	05:45 PM	1097
ADMIRALTY WAY N/O FIJI WAY	08/13/2005	Sat		433	Major	Total	17430	11:45 AM	1171		
						North	8435	11:45 AM	617	12:45 PM	763
						South	8995	11:45 AM	554	06:00 PM	764
ADMIRALTY WAY N/O FIJI WAY	08/14/2005	Sun		433	Major	Total	15336	11:45 AM	1008		
						North	7173	11:45 AM	486	04:15 PM	689
						South	8163	11:30 AM	535	02:30 PM	725
ADMIRALTY WAY N/O FIJI WAY	07/13/2006	Thur		433	Major	Total	19728	08:15 AM	1326		
						North	9033	08:15 AM	685	06:00 PM	719
						South	10695	08:15 AM	641	05:30 PM	1046
ADMIRALTY WAY N/O FIJI WAY	07/14/2006	Fri		433	Major	Total	20198	08:15 AM	1213		
						North	9143	07:45 AM	605	04:30 PM	719
						South	11055	08:15 AM	613	05:15 PM	1078
ADMIRALTY WAY N/O FIJI WAY	07/15/2006	Sat		433	Major	Total	15917	11:45 AM	1112		
						North	7331	11:45 AM	572	02:00 PM	603
						South	8586	11:45 AM	540	05:15 PM	678
ADMIRALTY WAY N/O FIJI WAY	07/16/2006	Sun		433	Major	Total	14805	11:30 AM	1121		
						North	6488	11:30 AM	488	03:15 PM	544
						South	8317	11:45 AM	658	01:00 PM	693
ADMIRALTY WAY N/O FIJI WAY	07/19/2007	Thur		433	Major	Total	18730	08:00 AM	1172		
						North	8670	07:45 AM	621	05:45 PM	750
						South	10060	08:15 AM	564	05:00 PM	990
ADMIRALTY WAY N/O FIJI WAY	07/20/2007	Fri		433	Major	Total	19429	08:00 AM	1172		
						North	8994	07:45 AM	621	05:30 PM	748
						South	10435	08:15 AM	564	04:45 PM	982
ADMIRALTY WAY N/O FIJI WAY	07/21/2007	Sat		433	Major	Total	15013	11:45 AM	1035		
						North	6841	11:45 AM	478	01:45 PM	607
						South	8172	11:30 AM	557	05:45 PM	670
ADMIRALTY WAY N/O FIJI WAY	07/22/2007	Sun		433	Major	Total	14287	11:45 AM	1061		
						North	6195	11:45 AM	448	01:15 PM	540
						South	8092	11:30 AM	614	05:30 PM	693

Run Date: *08/25/2010*
Run Time *07:13 AM*

Los Angeles County Department of Public Works
Machine Count Traffic Volumes

Location	Count Date	Day	Condition	Jur	Hwp	Direction	24 Hr Vol	AM Peak Began	AM Peak Hr Vol	PM Peak Began	PM Peak Hr Vol
ADMIRALTY WAY E/O MINDANAO WAY	04/30/2009	Thur		433	Major	Total	16399	07:45 AM	1113		
						East Bd	8717	07:45 AM	542	04:45 PM	840
						West Bd	7682	07:45 AM	571	05:00 PM	669
ADMIRALTY WAY E/O MINDANAO WAY	05/01/2009	Fri		433	Major	Total	16787	07:45 AM	1113		
						East Bd	8924	07:45 AM	542	03:30 PM	832
						West Bd	7863	07:45 AM	571	05:15 PM	662
ADMIRALTY WAY E/O MINDANAO WAY	05/02/2009	Sat		433	Major	Total	12952	11:45 AM	1012		
						East Bd	6897	11:45 AM	507	12:15 PM	564
						West Bd	6055	11:45 AM	505	02:00 PM	538
ADMIRALTY WAY E/O MINDANAO WAY	05/03/2009	Sun		433	Major	Total	12012	11:45 AM	951		
						East Bd	6700	11:45 AM	549	02:30 PM	607
						West Bd	5312	11:45 AM	402	01:00 PM	512
ADMIRALTY WAY E/O MINDANAO WAY	03/18/2010	Thur		433	Major	Total	24054	11:00 AM	1808		
						East Bd	13563	11:00 AM	988	04:45 PM	1203
						West Bd	10491	11:00 AM	820	05:15 PM	802
ADMIRALTY WAY E/O MINDANAO WAY	03/19/2010	Fri		433	Major	Total	25219	11:45 AM	1600		
						East Bd	14206	11:45 AM	910	03:15 PM	1214
						West Bd	11013	11:45 AM	690	05:30 PM	884
ADMIRALTY WAY E/O MINDANAO WAY	03/20/2010	Sat		433	Major	Total	22459	11:45 AM	1718		
						East Bd	12783	11:15 AM	1007	01:00 PM	1123
						West Bd	9676	11:45 AM	725	02:15 PM	873
ADMIRALTY WAY E/O MINDANAO WAY	03/21/2010	Sun		433	Major	Total	19175	11:45 AM	1353		
						East Bd	11019	11:45 AM	803	02:15 PM	1013
						West Bd	8156	11:45 AM	550	03:15 PM	759
ADMIRALTY WAY N/O MINDANAO WAY	08/10/2005	Wed		433	Major	Total	32142	08:15 AM	2142		
						North	16056	08:15 AM	1145	05:30 PM	1243
						South	16086	08:00 AM	998	05:00 PM	1403
ADMIRALTY WAY N/O MINDANAO WAY	08/11/2005	Thur		433	Major	Total	31255	08:00 AM	2106		
						North	15554	07:45 AM	1122	05:15 PM	1188
						South	15701	08:00 AM	996	05:30 PM	1368
ADMIRALTY WAY N/O MINDANAO WAY	08/12/2005	Fri		433	Major	Total	32489	08:15 AM	2024		
						North	16373	11:45 AM	1124	05:00 PM	1279
						South	16116	08:00 AM	980	05:15 PM	1357
ADMIRALTY WAY N/O MINDANAO WAY	08/13/2005	Sat		433	Major	Total	27412	11:45 AM	1975		
						North	13480	11:45 AM	1045	12:30 PM	1046
						South	13932	11:30 AM	944	05:30 PM	1105
ADMIRALTY WAY N/O MINDANAO WAY	08/14/2005	Sun		433	Major	Total	23877	11:45 AM	1819		
						North	11591	11:45 AM	926	02:00 PM	950
						South	12286	11:45 AM	893	05:45 PM	981
ADMIRALTY WAY N/O MINDANAO WAY	07/13/2006	Thur		433	Major	Total	32255	08:15 AM	2104		
						North	16051	08:15 AM	1087	05:45 PM	1252
						South	16204	08:15 AM	1017	05:30 PM	1396
ADMIRALTY WAY N/O MINDANAO WAY	07/14/2006	Fri		433	Major	Total	32956	08:15 AM	1992		
						North	16344	11:45 AM	1029	05:00 PM	1259
						South	16612	08:15 AM	973	05:15 PM	1415
ADMIRALTY WAY N/O MINDANAO WAY	07/15/2006	Sat		433	Major	Total	28401	11:45 AM	1965		
						North	14137	11:45 AM	1030	12:30 PM	1061
						South	14264	11:45 AM	935	05:00 PM	1051

Los Angeles County Department of Public Works
Machine Count Traffic Volumes

Location	Count Date	Day	Condition	Jur	Hwp	Direction	24 Hr Vol	AM Peak Began	AM Peak Hr Vol	PM Peak Began	PM Peak Hr Vol
ADMIRALTY WAY N/O MINDANAO WAY	07/16/2006	Sun		433	Major	Total	25934	11:45 AM	1858		
						North	12769	11:45 AM	938	02:15 PM	988
						South	13165	11:15 AM	920	12:45 PM	988
ADMIRALTY WAY N/O MINDANAO WAY	08/09/2007	Thur		433	Major	Total	30264	08:15 AM	1920		
						North	15206	08:15 AM	987	04:30 PM	1170
						South	15058	08:15 AM	933	05:30 PM	1235
ADMIRALTY WAY N/O MINDANAO WAY	08/10/2007	Fri		433	Major	Total	31023	08:15 AM	1920		
						North	15472	08:15 AM	987	05:15 PM	1173
						South	15551	08:15 AM	933	04:45 PM	1287
ADMIRALTY WAY N/O MINDANAO WAY	08/11/2007	Sat		433	Major	Total	27130	11:15 AM	1878		
						North	13343	11:15 AM	995	05:15 PM	1005
						South	13787	10:45 AM	905	03:30 PM	1048
ADMIRALTY WAY N/O MINDANAO WAY	08/12/2007	Sun		433	Major	Total	24889	11:45 AM	1798		
						North	12317	11:45 AM	898	03:00 PM	952
						South	12572	11:45 AM	900	04:00 PM	936

Run Date: *08/25/2010*
Run Time *07:17 AM*

Los Angeles County Department of Public Works
Machine Count Traffic Volumes

Location	Count Date	Day	Condition	Jur	Hwp	Direction	24 Hr Vol	AM Peak Began	AM Peak Hr Vol	PM Peak Began	PM Peak Hr Vol
ADMIRALTY WAY E/O BALI WAY	04/30/2009	Thur		433	Major	Total	29079	08:00 AM	1990		
						East Bd	14170	08:15 AM	952	05:00 PM	1206
						West Bd	14909	07:45 AM	1052	05:15 PM	1303
ADMIRALTY WAY E/O BALI WAY	05/01/2009	Fri		433	Major	Total	29741	08:00 AM	1990		
						East Bd	14571	08:15 AM	952	04:00 PM	1190
						West Bd	15170	07:45 AM	1052	04:45 PM	1233
ADMIRALTY WAY E/O BALI WAY	05/02/2009	Sat		433	Major	Total	24801	11:45 AM	1851		
						East Bd	12443	10:45 AM	948	12:15 PM	989
						West Bd	12358	11:45 AM	930	12:45 PM	1002
ADMIRALTY WAY E/O BALI WAY	05/03/2009	Sun		433	Major	Total	22994	11:45 AM	1745		
						East Bd	11600	11:45 AM	892	04:00 PM	997
						West Bd	11394	11:45 AM	853	01:15 PM	1007
ADMIRALTY WAY E/O BALI WAY	03/18/2010	Thur		433	Major	Total	28641	08:00 AM	1958		
						East Bd	14071	08:30 AM	960	04:45 PM	1266
						West Bd	14570	08:00 AM	1026	05:30 PM	1137
ADMIRALTY WAY E/O BALI WAY	03/19/2010	Fri		433	Major	Total	29830	08:00 AM	1958		
						East Bd	14607	08:30 AM	960	04:15 PM	1156
						West Bd	15223	08:00 AM	1026	05:15 PM	1244
ADMIRALTY WAY E/O BALI WAY	03/20/2010	Sat		433	Major	Total	26042	11:45 AM	1904		
						East Bd	12684	11:15 AM	932	05:00 PM	934
						West Bd	13358	11:45 AM	990	02:30 PM	1117
ADMIRALTY WAY E/O BALI WAY	03/21/2010	Sun		433	Major	Total	22514	11:45 AM	1593		
						East Bd	11197	11:30 AM	827	04:45 PM	861
						West Bd	11317	11:45 AM	771	03:30 PM	945
ADMIRALTY WAY W/O BALI WAY	06/16/2005	Thur		433	Major	Total	37151	08:00 AM	2274		
						East Bd	18790	08:00 AM	1129	04:15 PM	1549
						West Bd	18361	07:45 AM	1150	05:45 PM	1639
ADMIRALTY WAY W/O BALI WAY	06/17/2005	Fri		433	Major	Total	39445	08:00 AM	2274		
						East Bd	19722	08:00 AM	1129	04:30 PM	1604
						West Bd	19723	11:45 AM	1196	05:15 PM	1578
ADMIRALTY WAY W/O BALI WAY	06/18/2005	Sat		433	Major	Total	36800	11:45 AM	2677		
						East Bd	18329	11:45 AM	1275	03:45 PM	1453
						West Bd	18471	11:45 AM	1402	12:15 PM	1450
ADMIRALTY WAY W/O BALI WAY	06/19/2005	Sun		433	Major	Total	33406	11:45 AM	2512		
						East Bd	17024	11:45 AM	1172	03:15 PM	1412
						West Bd	16382	11:45 AM	1340	01:30 PM	1324
ADMIRALTY WAY W/O BALI WAY	06/22/2005	Wed		433	Major	Total	38276	08:00 AM	2383		
						East Bd	19201	08:00 AM	1128	04:30 PM	1544
						West Bd	19075	08:00 AM	1255	04:45 PM	1590
ADMIRALTY WAY W/O BALI WAY	06/23/2005	Thur		433	Major	Total	38771	08:15 AM	2430		
						East Bd	19381	08:15 AM	1183	05:00 PM	1560
						West Bd	19390	08:00 AM	1255	05:15 PM	1657
ADMIRALTY WAY W/O BALI WAY	06/24/2005	Fri		433	Major	Total	40804	11:45 AM	2430		
						East Bd	20273	08:00 AM	1176	04:45 PM	1645
						West Bd	20531	11:45 AM	1401	05:45 PM	1640
ADMIRALTY WAY W/O BALI WAY	06/25/2005	Sat		433	Major	Total	34384	11:45 AM	2461		
						East Bd	16788	11:30 AM	1193	05:15 PM	1279
						West Bd	17596	11:45 AM	1268	01:00 PM	1423

Los Angeles County Department of Public Works
Machine Count Traffic Volumes

Location	Count Date	Day	Condition	Jur	Hwp	Direction	24 Hr Vol	AM Peak Began	AM Peak Hr Vol	PM Peak Began	PM Peak Hr Vol
ADMIRALTY WAY W/O BALI WAY	06/26/2005	Sun		433	Major	Total	32368	11:30 AM	2323		
						East Bd	16226	11:30 AM	1090	04:45 PM	1295
						West Bd	16142	11:45 AM	1251	12:45 PM	1314
ADMIRALTY WAY W/O BALI WAY	06/27/2005	Mon		433	Major	Total	33613	08:15 AM	2199		
						East Bd	16646	08:15 AM	1165	04:15 PM	1216
						West Bd	16967	07:45 AM	1082	06:00 PM	1446
ADMIRALTY WAY W/O BALI WAY	09/28/2005	Wed		433	Major	Total	34058	07:45 AM	2231		
						East Bd	17198	08:15 AM	1161	05:00 PM	1461
						West Bd	16860	07:45 AM	1151	06:00 PM	1468
ADMIRALTY WAY W/O BALI WAY	09/29/2005	Thur		433	Major	Total	34408	07:45 AM	2231		
						East Bd	17369	08:15 AM	1161	05:30 PM	1523
						West Bd	17039	07:45 AM	1151	05:00 PM	1347
ADMIRALTY WAY W/O BALI WAY	09/30/2005	Fri		433	Major	Total	36099	08:00 AM	2340		
						East Bd	18403	08:30 AM	1150	05:00 PM	1553
						West Bd	17696	08:00 AM	1211	05:30 PM	1349
ADMIRALTY WAY W/O BALI WAY	10/01/2005	Sat		433	Major	Total	30899	11:45 AM	2128		
						East Bd	15429	11:45 AM	1092	01:15 PM	1170
						West Bd	15470	11:45 AM	1036	02:45 PM	1144
ADMIRALTY WAY W/O BALI WAY	10/02/2005	Sun		433	Major	Total	26786	11:45 AM	1871		
						East Bd	13505	11:45 AM	899	02:00 PM	1110
						West Bd	13281	11:45 AM	972	04:30 PM	1074
ADMIRALTY WAY W/O BALI WAY	10/03/2005	Mon		433	Major	Total	31562	08:00 AM	2193		
						East Bd	15809	08:15 AM	1143	04:45 PM	1335
						West Bd	15753	07:30 AM	1083	05:30 PM	1428
ADMIRALTY WAY W/O BALI WAY	01/25/2006	Wed		433	Major	Total	32950	08:00 AM	2256		
						East Bd	17035	08:00 AM	1231	04:45 PM	1508
						West Bd	15915	07:45 AM	1049	05:30 PM	1422
ADMIRALTY WAY W/O BALI WAY	01/26/2006	Thur		433	Major	Total	32732	08:00 AM	2256		
						East Bd	17051	08:00 AM	1231	04:45 PM	1514
						West Bd	15681	07:45 AM	1049	05:30 PM	1337
ADMIRALTY WAY W/O BALI WAY	01/27/2006	Fri		433	Major	Total	36173	08:00 AM	2195		
						East Bd	18821	08:30 AM	1134	04:30 PM	1632
						West Bd	17352	11:45 AM	1090	04:15 PM	1403
ADMIRALTY WAY W/O BALI WAY	01/28/2006	Sat		433	Major	Total	30989	11:45 AM	2287		
						East Bd	16072	11:45 AM	1212	12:00 PM	1246
						West Bd	14917	11:45 AM	1075	04:30 PM	1160
ADMIRALTY WAY W/O BALI WAY	01/29/2006	Sun		433	Major	Total	26201	11:45 AM	1956		
						East Bd	13375	11:45 AM	987	03:30 PM	1188
						West Bd	12826	11:45 AM	969	01:15 PM	1061
ADMIRALTY WAY W/O BALI WAY	01/30/2006	Mon		433	Major	Total	30382	08:15 AM	2186		
						East Bd	15608	08:15 AM	1214	04:45 PM	1394
						West Bd	14774	07:30 AM	992	05:00 PM	1237
ADMIRALTY WAY W/O BALI WAY	02/22/2006	Wed		433	Major	Total	34556	08:00 AM	2326		
						East Bd	17480	08:00 AM	1259	04:30 PM	1539
						West Bd	17076	07:30 AM	1114	05:45 PM	1391
ADMIRALTY WAY W/O BALI WAY	02/23/2006	Thur		433	Major	Total	35453	08:00 AM	2326		
						East Bd	17978	08:00 AM	1259	04:45 PM	1569
						West Bd	17475	07:30 AM	1114	05:30 PM	1562

Los Angeles County Department of Public Works
Machine Count Traffic Volumes

Location	Count Date	Day	Condition	Jur	Hwp	Direction	24 Hr Vol	AM Peak Began	AM Peak Hr Vol	PM Peak Began	PM Peak Hr Vol
ADMIRALTY WAY W/O BALI WAY	02/24/2006	Fri		433	Major	Total	36504	07:45 AM	2344		
						East Bd	18629	08:00 AM	1205	05:00 PM	1548
						West Bd	17875	11:45 AM	1161	04:45 PM	1442
ADMIRALTY WAY W/O BALI WAY	02/25/2006	Sat		433	Major	Total	32765	11:45 AM	2297		
						East Bd	16362	11:45 AM	1162	04:30 PM	1278
						West Bd	16403	11:45 AM	1135	01:00 PM	1264
ADMIRALTY WAY W/O BALI WAY	02/26/2006	Sun		433	Major	Total	28079	11:30 AM	2188		
						East Bd	14039	11:45 AM	1067	01:30 PM	1224
						West Bd	14040	11:30 AM	1138	04:15 PM	1124
ADMIRALTY WAY W/O BALI WAY	02/27/2006	Mon	RAIN	433	Major	Total	32304	08:00 AM	2248		
						East Bd	16704	08:00 AM	1236	04:00 PM	1359
						West Bd	15600	07:30 AM	1014	05:30 PM	1433
ADMIRALTY WAY W/O BALI WAY	03/22/2006	Wed		433	Major	Total	33999	07:45 AM	2271		
						East Bd	17582	08:00 AM	1177	04:45 PM	1566
						West Bd	16417	07:45 AM	1123	05:45 PM	1405
ADMIRALTY WAY W/O BALI WAY	03/23/2006	Thur		433	Major	Total	34274	08:15 AM	2306		
						East Bd	17838	08:00 AM	1200	04:45 PM	1536
						West Bd	16436	07:30 AM	1125	05:30 PM	1390
ADMIRALTY WAY W/O BALI WAY	03/24/2006	Fri		433	Major	Total	36228	07:45 AM	2228		
						East Bd	18715	07:45 AM	1134	04:45 PM	1530
						West Bd	17513	07:30 AM	1118	05:45 PM	1400
ADMIRALTY WAY W/O BALI WAY	03/25/2006	Sat		433	Major	Total	30854	11:45 AM	2208		
						East Bd	15738	11:45 AM	1077	02:30 PM	1221
						West Bd	15116	11:45 AM	1131	12:45 PM	1223
ADMIRALTY WAY W/O BALI WAY	03/26/2006	Sun		433	Major	Total	28110	11:45 AM	2174		
						East Bd	14060	11:45 AM	1063	02:45 PM	1229
						West Bd	14050	11:45 AM	1111	01:00 PM	1143
ADMIRALTY WAY W/O BALI WAY	03/27/2006	Mon		433	Major	Total	31004	08:00 AM	2157		
						East Bd	15793	08:15 AM	1159	05:15 PM	1372
						West Bd	15211	07:30 AM	1075	05:45 PM	1340
ADMIRALTY WAY W/O BALI WAY	03/28/2006	Tue	RAIN	433	Major	Total	29109	08:00 AM	2190		
						East Bd	15104	08:30 AM	1199	04:45 PM	1230
						West Bd	14005	07:45 AM	1015	06:15 PM	1087
ADMIRALTY WAY W/O BALI WAY	04/26/2006	Wed		433	Major	Total	34252	08:00 AM	2278		
						East Bd	17764	08:15 AM	1230	04:30 PM	1492
						West Bd	16488	08:00 AM	1072	05:30 PM	1468
ADMIRALTY WAY W/O BALI WAY	04/27/2006	Thur		433	Major	Total	34529	08:00 AM	2278		
						East Bd	17935	08:15 AM	1210	05:00 PM	1525
						West Bd	16594	08:00 AM	1072	05:30 PM	1498
ADMIRALTY WAY W/O BALI WAY	04/28/2006	Fri		433	Major	Total	36002	08:00 AM	2217		
						East Bd	18749	08:15 AM	1262	04:30 PM	1568
						West Bd	17253	11:45 AM	1032	06:00 PM	1430
ADMIRALTY WAY W/O BALI WAY	04/29/2006	Sat		433	Major	Total	31651	11:45 AM	2245		
						East Bd	16197	11:45 AM	1138	12:00 PM	1160
						West Bd	15454	11:45 AM	1107	01:30 PM	1199
ADMIRALTY WAY W/O BALI WAY	04/30/2006	Sun		433	Major	Total	27938	11:45 AM	2015		
						East Bd	14269	11:30 AM	961	03:45 PM	1228
						West Bd	13669	11:45 AM	1056	12:45 PM	1153

Run Date: *08/25/2010*
Run Time *07:17 AM*

Los Angeles County Department of Public Works
Machine Count Traffic Volumes

Location	Count Date	Day	Condition	Jur	Hwp	Direction	24 Hr Vol	AM Peak Began	AM Peak Hr Vol	PM Peak Began	PM Peak Hr Vol
ADMIRALTY WAY W/O BALI WAY	05/01/2006	Mon		433	Major	Total	31260	07:45 AM	1997		
						East Bd	16115	08:15 AM	1153	04:45 PM	1319
						West Bd	15145	11:45 AM	925	05:30 PM	1423
ADMIRALTY WAY W/O BALI WAY	07/25/2006	Tue		433	Major	Total	35065	08:00 AM	2216		
						East Bd	17610	08:00 AM	1193	04:15 PM	1431
						West Bd	17455	08:30 AM	1031	05:30 PM	1508
ADMIRALTY WAY W/O BALI WAY	07/26/2006	Wed		433	Major	Total	36593	08:15 AM	2232		
						East Bd	18454	08:00 AM	1187	04:15 PM	1497
						West Bd	18139	08:15 AM	1065	05:00 PM	1550
ADMIRALTY WAY W/O BALI WAY	07/27/2006	Thur		433	Major	Total	37212	08:15 AM	2362		
						East Bd	18630	08:15 AM	1203	05:00 PM	1516
						West Bd	18582	08:15 AM	1159	05:45 PM	1557
ADMIRALTY WAY W/O BALI WAY	07/28/2006	Fri		433	Major	Total	38153	11:45 AM	2153		
						East Bd	19168	08:30 AM	1139	05:00 PM	1582
						West Bd	18985	11:45 AM	1139	05:15 PM	1536
ADMIRALTY WAY W/O BALI WAY	07/29/2006	Sat		433	Major	Total	33430	11:30 AM	2313		
						East Bd	16764	11:30 AM	1196	03:45 PM	1279
						West Bd	16666	11:30 AM	1117	02:15 PM	1250
ADMIRALTY WAY W/O BALI WAY	07/30/2006	Sun		433	Major	Total	30096	11:45 AM	2107		
						East Bd	15073	11:45 AM	1029	04:15 PM	1187
						West Bd	15023	11:45 AM	1078	01:30 PM	1169
ADMIRALTY WAY W/O BALI WAY	07/31/2006	Mon		433	Major	Total	33952	08:00 AM	2132		
						East Bd	17081	08:00 AM	1162	05:00 PM	1390
						West Bd	16871	11:45 AM	995	05:15 PM	1510
ADMIRALTY WAY W/O BALI WAY	08/30/2006	Wed		433	Major	Total	34427	08:30 AM	2155		
						East Bd	17469	08:30 AM	1179	04:45 PM	1505
						West Bd	16958	08:00 AM	1005	05:30 PM	1479
ADMIRALTY WAY W/O BALI WAY	08/31/2006	Thur		433	Major	Total	35287	08:30 AM	2155		
						East Bd	17764	08:30 AM	1179	05:00 PM	1445
						West Bd	17523	08:00 AM	1005	05:15 PM	1576
ADMIRALTY WAY W/O BALI WAY	09/01/2006	Fri		433	Major	Total	36550	11:45 AM	2035		
						East Bd	18592	08:45 AM	1106	04:30 PM	1534
						West Bd	17958	11:45 AM	1047	05:00 PM	1419
ADMIRALTY WAY W/O BALI WAY	09/02/2006	Sat		433	Major	Total	30966	11:45 AM	2146		
						East Bd	15390	11:30 AM	1044	04:00 PM	1161
						West Bd	15576	11:45 AM	1108	12:45 PM	1200
ADMIRALTY WAY W/O BALI WAY	09/03/2006	Sun		433	Major	Total	27987	11:45 AM	1926		
						East Bd	13971	11:45 AM	920	03:00 PM	1151
						West Bd	14016	11:45 AM	1006	01:00 PM	1088
ADMIRALTY WAY W/O BALI WAY	09/04/2006	Mon	HOLIDAY	433	Major	Total	26993	11:45 AM	1978		
						East Bd	13467	11:45 AM	912	02:45 PM	1094
						West Bd	13526	11:45 AM	1066	01:00 PM	1124
ADMIRALTY WAY W/O BALI WAY	10/26/2006	Thur		433	Major	Total	35115	08:15 AM	2248		
						East Bd	17865	08:15 AM	1216	05:15 PM	1491
						West Bd	17250	07:45 AM	1071	05:30 PM	1510
ADMIRALTY WAY W/O BALI WAY	10/27/2006	Fri		433	Major	Total	36588	08:15 AM	2248		
						East Bd	18534	08:15 AM	1216	04:30 PM	1550
						West Bd	18054	11:45 AM	1077	05:15 PM	1538

Los Angeles County Department of Public Works
Machine Count Traffic Volumes

Location	Count Date	Day	Condition	Jur	Hwp	Direction	24 Hr Vol	AM Peak Began	AM Peak Hr Vol	PM Peak Began	PM Peak Hr Vol
ADMIRALTY WAY W/O BALI WAY	10/28/2006	Sat		433	Major	Total	31717	11:45 AM	2289		
						East Bd	15866	11:45 AM	1125	04:00 PM	1216
						West Bd	15851	11:45 AM	1164	12:45 PM	1257
ADMIRALTY WAY W/O BALI WAY	10/29/2006	Sun		433	Major	Total	27237	11:45 AM	1857		
						East Bd	13562	11:45 AM	910	04:15 PM	1173
						West Bd	13675	11:45 AM	947	02:15 PM	1094
ADMIRALTY WAY W/O BALI WAY	08/29/2007	Wed		433	Major	Total	35403	08:00 AM	2162		
						East Bd	17779	08:00 AM	1141	05:15 PM	1468
						West Bd	17624	08:00 AM	1021	05:45 PM	1543
ADMIRALTY WAY W/O BALI WAY	08/30/2007	Thur		433	Major	Total	35680	08:15 AM	2183		
						East Bd	17970	08:15 AM	1188	05:00 PM	1436
						West Bd	17710	11:45 AM	1098	05:45 PM	1523
ADMIRALTY WAY W/O BALI WAY	08/31/2007	Fri		433	Major	Total	36510	11:45 AM	2088		
						East Bd	18961	08:30 AM	1094	04:15 PM	1583
						West Bd	17549	11:45 AM	1019	05:45 PM	1418
ADMIRALTY WAY W/O BALI WAY	09/01/2007	Sat		433	Major	Total	32976	11:45 AM	2313		
						East Bd	16461	11:45 AM	1119	03:15 PM	1232
						West Bd	16515	11:45 AM	1194	04:15 PM	1321
ADMIRALTY WAY W/O BALI WAY	09/02/2007	Sun		433	Major	Total	29821	11:45 AM	2060		
						East Bd	14761	11:45 AM	951	03:15 PM	1078
						West Bd	15060	11:45 AM	1109	01:30 PM	1135
ADMIRALTY WAY W/O BALI WAY	09/03/2007	Mon		433	Major	Total	27969	11:45 AM	2018		
						East Bd	13999	11:30 AM	948	04:30 PM	1055
						West Bd	13970	11:45 AM	1105	12:00 PM	1119
ADMIRALTY WAY W/O BALI WAY	04/23/2008	Wed		433	Major	Total	34384	08:00 AM	2210		
						East Bd	17187	08:00 AM	1171	03:30 PM	1409
						West Bd	17197	08:00 AM	1039	05:00 PM	1463
ADMIRALTY WAY W/O BALI WAY	04/24/2008	Thur		433	Major	Total	34945	08:00 AM	2210		
						East Bd	17515	08:00 AM	1171	04:00 PM	1387
						West Bd	17430	11:45 AM	1051	05:30 PM	1534
ADMIRALTY WAY W/O BALI WAY	04/25/2008	Fri		433	Major	Total	35360	08:00 AM	2182		
						East Bd	17801	08:00 AM	1146	03:30 PM	1471
						West Bd	17559	07:30 AM	1039	05:30 PM	1418
ADMIRALTY WAY W/O BALI WAY	04/26/2008	Sat		433	Major	Total	31519	11:00 AM	2145		
						East Bd	15628	11:00 AM	1011	04:30 PM	1179
						West Bd	15891	11:30 AM	1162	01:00 PM	1200
ADMIRALTY WAY W/O BALI WAY	04/27/2008	Sun		433	Major	Total	29381	11:30 AM	2073		
						East Bd	14703	11:30 AM	982	03:45 PM	1155
						West Bd	14678	11:15 AM	1093	01:00 PM	1195
ADMIRALTY WAY W/O BALI WAY	04/28/2008	Mon		433	Major	Total	32459	08:00 AM	2113		
						East Bd	16203	08:15 AM	1103	05:15 PM	1318
						West Bd	16256	11:45 AM	1022	05:45 PM	1470
ADMIRALTY WAY W/O BALI WAY	04/30/2009	Thur		433	Major	Total	33366	07:45 AM	2179		
						East Bd	16365	08:00 AM	1142	05:00 PM	1348
						West Bd	17001	07:45 AM	1069	05:30 PM	1570
ADMIRALTY WAY W/O BALI WAY	05/01/2009	Fri		433	Major	Total	33870	07:45 AM	2179		
						East Bd	16827	08:00 AM	1142	03:45 PM	1371
						West Bd	17043	07:45 AM	1069	05:30 PM	1522

Run Date: 08/25/2010
Run Time 07:17 AM

Los Angeles County Department of Public Works
Machine Count Traffic Volumes

Location	Count Date	Day	Condition	Jur	Hwp	Direction	24 Hr Vol	AM Peak Began	AM Peak Hr Vol	PM Peak Began	PM Peak Hr Vol
ADMIRALTY WAY W/O BALI WAY	05/02/2009	Sat		433	Major	Total	28481	11:45 AM	2109		
						East Bd	14118	11:45 AM	1046	12:15 PM	1100
						West Bd	14363	11:45 AM	1063	12:45 PM	1080
ADMIRALTY WAY W/O BALI WAY	05/03/2009	Sun		433	Major	Total	26745	11:45 AM	2029		
						East Bd	13200	11:45 AM	1038	04:15 PM	1126
						West Bd	13545	11:45 AM	991	01:15 PM	1183
ADMIRALTY WAY W/O BALI WAY	09/23/2009	Wed		433	Major	Total	33521	08:00 AM	2285		
						East Bd	16464	08:15 AM	1214	05:30 PM	1334
						West Bd	17057	07:30 AM	1128	05:45 PM	1530
ADMIRALTY WAY W/O BALI WAY	01/28/2010	Thur		433	Major	Total	32594	08:30 AM	2085		
						East Bd	16070	08:15 AM	1093	05:15 PM	1369
						West Bd	16524	08:30 AM	1005	05:30 PM	1402
ADMIRALTY WAY W/O BALI WAY	01/29/2010	Fri		433	Major	Total	34718	08:30 AM	2085		
						East Bd	17343	08:15 AM	1093	05:15 PM	1431
						West Bd	17375	11:45 AM	1067	05:00 PM	1550
ADMIRALTY WAY W/O BALI WAY	01/30/2010	Sat		433	Major	Total	30959	11:45 AM	2268		
						East Bd	15294	11:45 AM	1086	02:45 PM	1231
						West Bd	15665	11:45 AM	1182	04:45 PM	1251
ADMIRALTY WAY W/O BALI WAY	01/31/2010	Sun		433	Major	Total	26461	11:45 AM	2032		
						East Bd	13099	11:45 AM	1030	03:45 PM	1140
						West Bd	13362	11:45 AM	1002	03:15 PM	1190
ADMIRALTY WAY W/O BALI WAY	02/01/2010	Mon		433	Major	Total	30078	08:00 AM	2136		
						East Bd	14648	08:15 AM	1202	04:30 PM	1200
						West Bd	15430	07:30 AM	973	05:15 PM	1488
ADMIRALTY WAY W/O BALI WAY	02/24/2010	Wed	RAIN	433	Major	Total	31908	08:15 AM	2277		
						East Bd	15799	08:15 AM	1200	04:00 PM	1322
						West Bd	16109	07:45 AM	1085	05:30 PM	1453
ADMIRALTY WAY W/O BALI WAY	02/25/2010	Thur		433	Major	Total	33772	08:15 AM	2277		
						East Bd	16635	08:15 AM	1200	05:00 PM	1346
						West Bd	17137	07:45 AM	1085	05:45 PM	1594
ADMIRALTY WAY W/O BALI WAY	02/26/2010	Fri		433	Major	Total	35689	08:00 AM	2162		
						East Bd	17674	08:30 AM	1197	04:30 PM	1401
						West Bd	18015	11:30 AM	1022	05:45 PM	1627
ADMIRALTY WAY W/O BALI WAY	02/27/2010	Sat	RAIN	433	Major	Total	29490	11:45 AM	2213		
						East Bd	14656	11:45 AM	1162	12:00 PM	1154
						West Bd	14834	11:45 AM	1051	04:45 PM	1167
ADMIRALTY WAY W/O BALI WAY	02/28/2010	Sun		433	Major	Total	28752	11:45 AM	2183		
						East Bd	14236	11:30 AM	1047	03:15 PM	1218
						West Bd	14516	11:45 AM	1161	03:45 PM	1216
ADMIRALTY WAY W/O BALI WAY	03/01/2010	Mon		433	Major	Total	31997	08:00 AM	2241		
						East Bd	15548	08:15 AM	1233	03:45 PM	1281
						West Bd	16449	08:00 AM	1053	05:00 PM	1510
ADMIRALTY WAY W/O BALI WAY	06/23/2010	Wed		433	Major	Total	36519	08:15 AM	2234		
						East Bd	17898	08:15 AM	1242	05:00 PM	1420
						West Bd	18621	11:45 AM	1181	05:00 PM	1610
ADMIRALTY WAY W/O BALI WAY	06/24/2010	Thur		433	Major	Total	35941	08:15 AM	2211		
						East Bd	17643	08:15 AM	1249	04:30 PM	1397
						West Bd	18298	11:30 AM	1072	05:30 PM	1644

Los Angeles County Department of Public Works
Machine Count Traffic Volumes

								AM Peak		PM Peak	
Location	Count Date	Day	Condition	Jur	Hwp	Direction	24 Hr Vol	Began	Hr Vol	Began	Hr Vol
ADMIRALTY WAY W/O BALI WAY	06/25/2010	Fri		433	Major	Total	37990	11:45 AM	2207		
						East Bd	18496	08:15 AM	1240	04:45 PM	1422
						West Bd	19494	11:45 AM	1148	05:00 PM	1589
ADMIRALTY WAY W/O BALI WAY	06/26/2010	Sat		433	Major	Total	33446	11:15 AM	2290		
						East Bd	16336	11:15 AM	1095	03:30 PM	1267
						West Bd	17110	10:45 AM	1213	02:45 PM	1291
ADMIRALTY WAY W/O BALI WAY	06/27/2010	Sun		433	Major	Total	30471	11:45 AM	2177		
						East Bd	14759	10:45 AM	985	04:30 PM	1182
						West Bd	15712	11:30 AM	1196	01:30 PM	1296
ADMIRALTY WAY W/O BALI WAY	06/28/2010	Mon		433	Major	Total	33206	08:15 AM	2194		
						East Bd	16248	08:15 AM	1218	03:30 PM	1266
						West Bd	16958	08:15 AM	976	05:30 PM	1567
ADMIRALTY WAY W/O BALI WAY	06/29/2010	Tue		433	Major	Total	34028	08:30 AM	2222		
						East Bd	16610	08:30 AM	1255	05:00 PM	1311
						West Bd	17418	11:30 AM	1010	05:15 PM	1601

Run Date: *08/25/2010*
Run Time *07:18 AM*

Los Angeles County Department of Public Works
Machine Count Traffic Volumes

Location	Count Date	Day	Condition	Jur	Hwp	Direction	24 Hr Vol	AM Peak Began	AM Peak Hr Vol	PM Peak Began	PM Peak Hr Vol
ADMIRALTY WAY E/O PALAWAN WAY	08/10/2005	Wed		433	Major	Total	32856	08:30 AM	2191		
						East Bd	16916	08:30 AM	1125	05:45 PM	1469
						West Bd	15940	08:30 AM	1066	05:45 PM	1288
ADMIRALTY WAY E/O PALAWAN WAY	08/11/2005	Thur		433	Major	Total	31262	08:30 AM	2109		
						East Bd	16532	08:30 AM	1125	05:45 PM	1437
						West Bd	14730	08:30 AM	984	06:00 PM	1221
ADMIRALTY WAY E/O PALAWAN WAY	08/12/2005	Fri		433	Major	Total	33638	08:30 AM	1983		
						East Bd	17187	08:15 AM	1049	05:30 PM	1490
						West Bd	16451	11:45 AM	974	05:45 PM	1367
ADMIRALTY WAY E/O PALAWAN WAY	08/13/2005	Sat		433	Major	Total	29467	11:45 AM	2005		
						East Bd	15149	11:45 AM	1023	05:15 PM	1138
						West Bd	14318	11:45 AM	982	01:00 PM	1066
ADMIRALTY WAY E/O PALAWAN WAY	08/14/2005	Sun		433	Major	Total	26388	11:45 AM	1843		
						East Bd	13373	11:45 AM	944	05:45 PM	1032
						West Bd	13015	11:45 AM	899	05:15 PM	1061
ADMIRALTY WAY E/O PALAWAN WAY	07/13/2006	Thur		433	Major	Total	32778	08:15 AM	2085		
						East Bd	17086	08:15 AM	1134	05:30 PM	1455
						West Bd	15692	08:15 AM	951	05:45 PM	1341
ADMIRALTY WAY E/O PALAWAN WAY	07/14/2006	Fri		433	Major	Total	34090	08:30 AM	2032		
						East Bd	17689	08:30 AM	1117	03:15 PM	1446
						West Bd	16401	11:45 AM	974	04:45 PM	1390
ADMIRALTY WAY E/O PALAWAN WAY	07/15/2006	Sat		433	Major	Total	30197	11:15 AM	1993		
						East Bd	15504	11:00 AM	1008	04:45 PM	1137
						West Bd	14693	11:15 AM	985	01:00 PM	1079
ADMIRALTY WAY E/O PALAWAN WAY	07/16/2006	Sun		433	Major	Total	27744	11:30 AM	1935		
						East Bd	14040	11:30 AM	994	12:45 PM	1053
						West Bd	13704	11:45 AM	943	02:45 PM	1046
ADMIRALTY WAY E/O PALAWAN WAY	07/24/2007	Tue		433	Major	Total	32445	09:15 AM	2004		
						East Bd	15732	08:45 AM	925	06:45 PM	1314
						West Bd	16713	09:30 AM	1095	06:00 PM	1495
ADMIRALTY WAY E/O PALAWAN WAY	07/25/2007	Wed		433	Major	Total	33065	09:15 AM	2004		
						East Bd	16006	08:45 AM	925	06:30 PM	1306
						West Bd	17059	09:30 AM	1095	05:30 PM	1468
ADMIRALTY WAY E/O PALAWAN WAY	07/26/2007	Thur		433	Major	Total	29320	11:45 AM	1873		
						East Bd	14281	11:45 AM	900	04:30 PM	1051
						West Bd	15039	11:45 AM	973	06:30 PM	1187
ADMIRALTY WAY E/O PALAWAN WAY	07/27/2007	Fri		433	Major	Total	27666	11:45 AM	1724		
						East Bd	13640	11:45 AM	857	03:00 PM	1053
						West Bd	14026	11:45 AM	867	06:30 PM	1175
ADMIRALTY WAY E/O PALAWAN WAY	04/30/2009	Thur		433	Major	Total	30729	08:00 AM	2059		
						East Bd	15708	08:00 AM	1128	04:45 PM	1364
						West Bd	15021	07:45 AM	934	05:45 PM	1373
ADMIRALTY WAY E/O PALAWAN WAY	05/01/2009	Fri		433	Major	Total	31212	08:00 AM	2059		
						East Bd	16096	08:00 AM	1128	05:00 PM	1340
						West Bd	15116	07:45 AM	934	05:30 PM	1330
ADMIRALTY WAY E/O PALAWAN WAY	05/02/2009	Sat		433	Major	Total	26470	11:45 AM	1929		
						East Bd	13622	11:45 AM	977	04:30 PM	1039
						West Bd	12848	11:45 AM	952	12:00 PM	976

Run Date: 08/25/2010
Run Time 07:18 AM

Los Angeles County Department of Public Works
Machine Count Traffic Volumes

Location	Count Date	Day	Condition	Jur	Hwp	Direction	24 Hr Vol	AM Peak Began	AM Peak Hr Vol	PM Peak Began	PM Peak Hr Vol
ADMIRALTY WAY E/O PALAWAN WAY	05/03/2009	Sun		433	Major	Total	24398	11:45 AM	1790		
						East Bd	12383	11:45 AM	937	03:45 PM	1001
						West Bd	12015	11:45 AM	853	04:00 PM	1006
ADMIRALTY WAY E/O PALAWAN WAY	03/18/2010	Thur		433	Major	Total	30511	08:15 AM	2025		
						East Bd	15469	08:15 AM	1124	04:45 PM	1375
						West Bd	15042	08:00 AM	929	05:30 PM	1316
ADMIRALTY WAY E/O PALAWAN WAY	03/19/2010	Fri		433	Major	Total	32456	08:15 AM	2025		
						East Bd	16429	08:15 AM	1124	04:15 PM	1325
						West Bd	16027	11:45 AM	955	05:30 PM	1374
ADMIRALTY WAY E/O PALAWAN WAY	03/20/2010	Sat		433	Major	Total	29522	11:45 AM	2033		
						East Bd	14641	11:30 AM	1010	05:30 PM	1139
						West Bd	14881	11:45 AM	1038	02:45 PM	1272
ADMIRALTY WAY E/O PALAWAN WAY	03/21/2010	Sun		433	Major	Total	25591	11:45 AM	1748		
						East Bd	12641	11:30 AM	894	05:00 PM	1100
						West Bd	12950	11:45 AM	870	02:45 PM	1136
ADMIRALTY WAY E/O PALAWAN WAY	03/22/2010	Mon		433	Major	Total	28653	08:15 AM	2096		
						East Bd	14282	08:00 AM	1127	05:00 PM	1206
						West Bd	14371	08:15 AM	970	06:00 PM	1376
ADMIRALTY WAY W/O PALAWAN WAY	08/10/2005	Wed		433	Major	Total	30172	08:30 AM	2012		
						East Bd	14100	08:30 AM	985	05:15 PM	1078
						West Bd	16072	08:30 AM	1027	06:15 PM	1323
ADMIRALTY WAY W/O PALAWAN WAY	08/11/2005	Thur		433	Major	Total	29289	08:30 AM	1935		
						East Bd	13862	08:30 AM	989	05:30 PM	1080
						West Bd	15427	08:15 AM	954	06:00 PM	1322
ADMIRALTY WAY W/O PALAWAN WAY	08/12/2005	Fri		433	Major	Total	30932	08:15 AM	1887		
						East Bd	14444	08:15 AM	969	05:30 PM	1151
						West Bd	16488	08:30 AM	940	05:45 PM	1428
ADMIRALTY WAY W/O PALAWAN WAY	08/13/2005	Sat		433	Major	Total	27669	11:45 AM	1877		
						East Bd	13157	11:45 AM	889	05:15 PM	1009
						West Bd	14512	11:45 AM	988	04:00 PM	1110
ADMIRALTY WAY W/O PALAWAN WAY	08/14/2005	Sun		433	Major	Total	24824	11:45 AM	1784		
						East Bd	11665	11:45 AM	848	02:00 PM	905
						West Bd	13159	11:45 AM	936	04:45 PM	1033
ADMIRALTY WAY W/O PALAWAN WAY	07/13/2006	Thur		433	Major	Total	30186	08:00 AM	1917		
						East Bd	14384	07:45 AM	1009	04:30 PM	1114
						West Bd	15802	08:15 AM	920	05:45 PM	1397
ADMIRALTY WAY W/O PALAWAN WAY	07/14/2006	Fri		433	Major	Total	31358	08:30 AM	1872		
						East Bd	14934	08:30 AM	992	03:15 PM	1172
						West Bd	16424	11:45 AM	959	05:15 PM	1415
ADMIRALTY WAY W/O PALAWAN WAY	07/15/2006	Sat		433	Major	Total	28306	11:45 AM	1859		
						East Bd	13349	11:45 AM	881	05:45 PM	1008
						West Bd	14957	11:15 AM	991	12:45 PM	1111
ADMIRALTY WAY W/O PALAWAN WAY	07/16/2006	Sun		433	Major	Total	26196	11:45 AM	1840		
						East Bd	12195	11:45 AM	862	04:15 PM	916
						West Bd	14001	11:45 AM	978	05:00 PM	1087
ADMIRALTY WAY W/O PALAWAN WAY	08/22/2007	Wed		433	Major	Total	28894	08:15 AM	1869		
						East Bd	13322	08:00 AM	957	04:45 PM	1031
						West Bd	15572	08:15 AM	938	05:00 PM	1292

Run Date: *08/25/2010*
Run Time *07:18 AM*

Los Angeles County Department of Public Works
Machine Count Traffic Volumes

Location	Count Date	Day	Condition	Jur	Hwp	Direction	24 Hr Vol	AM Peak Began	AM Peak Hr Vol	PM Peak Began	PM Peak Hr Vol
ADMIRALTY WAY W/O PALAWAN WAY	08/23/2007	Thur		433	Major	Total	29407	08:15 AM	1869		
						East Bd	13693	08:00 AM	957	05:45 PM	1107
						West Bd	15714	08:15 AM	938	05:15 PM	1407
ADMIRALTY WAY W/O PALAWAN WAY	08/24/2007	Fri		433	Major	Total	30662	08:15 AM	1874		
						East Bd	14169	08:00 AM	964	04:45 PM	1120
						West Bd	16493	08:15 AM	910	05:45 PM	1379
ADMIRALTY WAY W/O PALAWAN WAY	08/25/2007	Sat		433	Major	Total	26733	11:15 AM	1817		
						East Bd	12572	11:30 AM	890	05:15 PM	933
						West Bd	14161	11:15 AM	957	05:00 PM	1080
ADMIRALTY WAY W/O PALAWAN WAY	08/26/2007	Sun		433	Major	Total	24204	11:45 AM	1723		
						East Bd	11400	11:45 AM	839	01:15 PM	924
						West Bd	12804	11:30 AM	885	12:45 PM	1014

Run Date: *08/25/2010*
Run Time *07:20 AM*

Los Angeles County Department of Public Works
Machine Count Traffic Volumes

Location	Count Date	Day	Condition	Jur	Hwp	Direction	24 Hr Vol	AM Peak Began	AM Peak Hr Vol	PM Peak Began	PM Peak Hr Vol
ADMIRALTY WAY E/O VIA MARINA	04/30/2009	Thur		433	Major	Total	29043	08:00 AM	1967		
						East Bd	14507	08:00 AM	1081	05:30 PM	1253
						West Bd	14536	07:45 AM	912	05:45 PM	1377
ADMIRALTY WAY E/O VIA MARINA	05/01/2009	Fri		433	Major	Total	29541	08:00 AM	1967		
						East Bd	14782	08:00 AM	1081	05:15 PM	1192
						West Bd	14759	07:45 AM	912	05:15 PM	1359
ADMIRALTY WAY E/O VIA MARINA	05/02/2009	Sat		433	Major	Total	25655	11:45 AM	1883		
						East Bd	13120	11:30 AM	932	04:45 PM	983
						West Bd	12535	11:45 AM	952	12:30 PM	995
ADMIRALTY WAY E/O VIA MARINA	05/03/2009	Sun		433	Major	Total	23303	11:45 AM	1683		
						East Bd	11601	11:45 AM	855	05:15 PM	923
						West Bd	11702	11:45 AM	828	04:15 PM	987
ADMIRALTY WAY E/O VIA MARINA	03/18/2010	Thur		433	Major	Total	28644	08:15 AM	2004		
						East Bd	14724	08:15 AM	1120	04:45 PM	1217
						West Bd	13920	08:00 AM	907	05:30 PM	1235
ADMIRALTY WAY E/O VIA MARINA	03/19/2010	Fri		433	Major	Total	30518	08:15 AM	2004		
						East Bd	15788	08:15 AM	1120	04:15 PM	1200
						West Bd	14730	08:00 AM	907	05:30 PM	1304
ADMIRALTY WAY E/O VIA MARINA	03/20/2010	Sat		433	Major	Total	27263	11:30 AM	1908		
						East Bd	14010	11:30 AM	963	05:00 PM	1076
						West Bd	13253	11:45 AM	966	02:45 PM	1166
ADMIRALTY WAY E/O VIA MARINA	03/21/2010	Sun		433	Major	Total	24020	11:45 AM	1685		
						East Bd	12257	11:45 AM	892	05:00 PM	1090
						West Bd	11763	11:45 AM	793	03:15 PM	1048

Run Date: 08/25/2010
Run Time: 9:07 AM

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: Z89-Z92
Page: 1

Count Date: 08/12/2010 12:00 am Thursday   Condition: :   Location: ADMIRALTY WAY N/O MINDANAO WAY
Align Coord:

Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour	Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour
12:00 am	51	152	35	142	86	294	12:00 pm	242	948	203	804	445	1752
12:15 am	33	124	38	126	71	250	12:15 pm	214	927	210	803	424	1730
12:30 am	34	114	28	115	62	229	12:30 pm	258	949	178	833	436	1782
12:45 am	34	94	41	96	75	190	12:45 pm	234	909	213	871	447	1780
1:00 am	23	83	19	63	42	146	1:00 pm	221	939	202	879	423	1818
1:15 am	23	70	27	52	50	122	1:15 pm	236	939	240	876	476	1815
1:30 am	14	63	9	40	23	103	1:30 pm	218	941	216	870	434	1811
1:45 am	23	61	8	41	31	102	1:45 pm	264	971	221	881	485	1852
2:00 am	10	44	8	41	18	85	2:00 pm	221	943	199	870	420	1813
2:15 am	16	42	15	38	31	80	2:15 pm	238	979	234	922	472	1901
2:30 am	12	34	10	27	22	61	2:30 pm	248	1003	227	919	475	1922
2:45 am	6	30	8	24	14	54	2:45 pm	236	957	210	950	446	1907
3:00 am	8	31	5	21	13	52	3:00 pm	257	946	251	1012	508	1958
3:15 am	8	28	4	26	12	54	3:15 pm	262	929	231	1040	493	1969
3:30 am	8	28	7	32	15	60	3:30 pm	202	927	258	1081	460	2008
3:45 am	7	37	5	42	12	79	3:45 pm	225	993	272	1076	497	2069
4:00 am	5	48	10	61	15	109	4:00 pm	240	1067	279	1057	519	2124
4:15 am	8	53	10	80	18	133	4:15 pm	260	1088	272	1094	532	2182
4:30 am	17	77	17	106	34	183	4:30 pm	268	1110	253	1135	521	2245
4:45 am	18	101	24	139	42	240	4:45 pm	299	1150	253	1174	552	2324
5:00 am	10	131	29	163	39	294	5:00 pm	261	1161	316	1235	577	2396
5:15 am	32	169	36	189	68	358	5:15 pm	282	1208	313	1200	595	2408
5:30 am	41	183	50	226	91	409	5:30 pm	308	1226	292	1150	600	2376
5:45 am	48	221	48	262	96	483	5:45 pm	310	1218	314	1097	624	2315
6:00 am	48	289	55	308	103	597	6:00 pm	308	1198	281	1038	589	2236
6:15 am	46	371	73	380	119	751	6:15 pm	300	1159	263	989	563	2148
6:30 am	79	479	86	451	165	930	6:30 pm	300	1090	239	960	539	2050
6:45 am	116	582	94	547	210	1129	6:45 pm	290	1048	255	927	545	1975
7:00 am	130	702	127	649	257	1351	7:00 pm	269	1001	232	880	501	1881
7:15 am	154	830	144	723	298	1553	7:15 pm	231	926	234	842	465	1768
7:30 am	182	904	182	812	364	1716	7:30 pm	258	882	206	778	464	1660
7:45 am	236	984	196	861	432	1845	7:45 pm	243	834	208	728	451	1562
8:00 am	258	998	201	905	459	1903	8:00 pm	194	761	194	680	388	1441
8:15 am	228	972	233	936	461	1908	8:15 pm	187	731	170	626	357	1357
8:30 am	262	952	231	927	493	1879	8:30 pm	210	719	156	596	366	1315
8:45 am	250	909	240	920	490	1829	8:45 pm	170	652	160	566	330	1218
9:00 am	232	903	232	898	464	1801	9:00 pm	164	616	140	497	304	1113
9:15 am	208	859	224	880	432	1739	9:15 pm	175	582	140	468	315	1050
9:30 am	219	823	224	844	443	1667	9:30 pm	143	514	126	436	269	950
9:45 am	244	800	218	812	462	1612	9:45 pm	134	479	91	414	225	893
10:00 am	188	748	214	755	402	1503	10:00 pm	130	428	111	407	241	835
10:15 am	172	730	188	717	360	1447	10:15 pm	107	370	108	371	215	741
10:30 am	196	750	192	721	388	1471	10:30 pm	108	319	104	325	212	644
10:45 am	192	772	161	719	353	1491	10:45 pm	83	272	84	271	167	543
11:00 am	170	811	176	768	346	1579	11:00 pm	72	232	75	226	147	458
11:15 am	192	883	192	795	384	1678	11:15 pm	56		62		118	
11:30 am	218	905	190	813	408	1718	11:30 pm	61		50		111	
11:45 am	231	945	210	801	441	1746	11:45 pm	43		39		82	

24 Hour Direction	Volume	AM Peak Hour Time	Volume	PM Peak Hour Time	Volume
Total	29539	8:15 am	1908	5:15 pm	2408
N/B	15180	8:00 am	998	5:30 pm	1226
S/B	14359	8:15 am	936	5:00 pm	1235

Run Date: *08/25/2010*
Run Time: *9:07 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: Z89-Z92
Page: 1

Count Date: 08/14/2010 12:00 am Saturday   Condition: :   Location: ADMIRALTY WAY N/O MINDANAO WAY
Align Coord:

Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour	Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour
12:00 am	57	215	76	212	133	427	12:00 pm	235	1013	236	997	471	2010
12:15 am	70	193	52	183	122	376	12:15 pm	256	1033	248	1005	504	2038
12:30 am	48	157	42	184	90	341	12:30 pm	254	1050	255	969	509	2019
12:45 am	40	128	42	185	82	313	12:45 pm	268	1071	258	951	526	2022
1:00 am	35	111	47	188	82	299	1:00 pm	255	1079	244	947	499	2026
1:15 am	34	108	53	205	87	313	1:15 pm	273	1097	212	945	485	2042
1:30 am	19	94	43	196	62	290	1:30 pm	275	1086	237	960	512	2046
1:45 am	23	97	45	176	68	273	1:45 pm	276	1063	254	964	530	2027
2:00 am	32	88	64	142	96	230	2:00 pm	273	1041	242	952	515	1993
2:15 am	20	58	44	85	64	143	2:15 pm	262	1004	227	948	489	1952
2:30 am	22	48	23	55	45	103	2:30 pm	252	998	241	983	493	1981
2:45 am	14	37	11	43	25	80	2:45 pm	254	998	242	960	496	1958
3:00 am	2	33	7	41	9	74	3:00 pm	236	964	238	950	474	1914
3:15 am	10	40	14	46	24	86	3:15 pm	256	971	262	944	518	1915
3:30 am	11	41	11	37	22	78	3:30 pm	252	974	218	915	470	1889
3:45 am	10	41	9	38	19	79	3:45 pm	220	958	232	961	452	1919
4:00 am	9	42	12	48	21	90	4:00 pm	243	989	232	961	475	1950
4:15 am	11	45	5	49	16	94	4:15 pm	259	993	233	971	492	1964
4:30 am	11	50	12	58	23	108	4:30 pm	236	922	264	991	500	1913
4:45 am	11	61	19	76	30	137	4:45 pm	251	929	232	968	483	1897
5:00 am	12	88	13	83	25	171	5:00 pm	247	904	242	954	489	1858
5:15 am	16	99	14	99	30	198	5:15 pm	188	907	253	914	441	1821
5:30 am	22	127	30	121	52	248	5:30 pm	243	941	241	883	484	1824
5:45 am	38	161	26	135	64	296	5:45 pm	226	904	218	879	444	1783
6:00 am	23	174	29	149	52	323	6:00 pm	250	885	202	919	452	1804
6:15 am	44	207	36	183	80	390	6:15 pm	222	809	222	931	444	1740
6:30 am	56	237	44	201	100	438	6:30 pm	206	779	237	911	443	1690
6:45 am	51	249	40	233	91	482	6:45 pm	207	737	258	862	465	1599
7:00 am	56	306	63	295	119	601	7:00 pm	174	716	214	768	388	1484
7:15 am	74	351	54	337	128	688	7:15 pm	192	738	202	734	394	1472
7:30 am	68	374	76	412	144	786	7:30 pm	164	694	188	696	352	1390
7:45 am	108	427	102	456	210	883	7:45 pm	186	698	164	646	350	1344
8:00 am	101	469	105	493	206	962	8:00 pm	196	674	180	632	376	1306
8:15 am	97	524	129	546	226	1070	8:15 pm	148	642	164	550	312	1192
8:30 am	121	599	120	593	241	1192	8:30 pm	168	667	138	508	306	1175
8:45 am	150	656	139	647	289	1303	8:45 pm	162	655	150	492	312	1147
9:00 am	156	692	158	706	314	1398	9:00 pm	164	621	98	456	262	1077
9:15 am	172	730	176	748	348	1478	9:15 pm	173	589	122	472	295	1061
9:30 am	178	800	174	758	352	1558	9:30 pm	156	536	122	473	278	1009
9:45 am	186	833	198	800	384	1633	9:45 pm	128	500	114	432	242	932
10:00 am	194	884	200	824	394	1708	10:00 pm	132	464	114	412	246	876
10:15 am	242	926	186	836	428	1762	10:15 pm	120	438	123	383	243	821
10:30 am	211	901	216	855	427	1756	10:30 pm	120	404	81	341	201	745
10:45 am	237	928	222	845	459	1773	10:45 pm	92	364	94	360	186	724
11:00 am	236	959	212	835	448	1794	11:00 pm	106	348	85	329	191	677
11:15 am	217	958	205	859	422	1817	11:15 pm	86		81		167	
11:30 am	238	997	206	902	444	1899	11:30 pm	80		100		180	
11:45 am	268	1013	212	951	480	1964	11:45 pm	76		63		139	

24 Hour Direction	Volume	AM Peak Hour Time	Volume	PM Peak Hour Time	Volume
Total	27052	11:45 am	1964	1:30 pm	2046
N/B	13759	11:45 am	1013	1:15 pm	1097
S/B	13293	11:45 am	951	12:15 pm	1005

Run Date: *08/25/2010*

Run Time: *9:07 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: Z85-Z88

Page: 1

Count Date: 08/12/2010 12:00 am Thursday   Condition: :   Location: ADMIRALTY WAY N/O FIJI WAY

Align Coord:

	N/B		S/B		Total			N/B		S/B		Total	
Time	15'	Hour	15'	Hour	15'	Hour	Time	15'	Hour	15'	Hour	15'	Hour
12:00 am	22	62	12	66	34	128	12:00 pm	124	525	120	478	244	1003
12:15 am	20	44	20	61	40	105	12:15 pm	98	535	124	479	222	1014
12:30 am	9	28	16	49	25	77	12:30 pm	157	581	94	515	251	1096
12:45 am	11	23	18	40	29	63	12:45 pm	146	554	140	547	286	1101
1:00 am	4	18	7	23	11	41	1:00 pm	134	570	121	533	255	1103
1:15 am	4	18	8	21	12	39	1:15 pm	144	570	160	523	304	1093
1:30 am	4	19	7	20	11	39	1:30 pm	130	580	126	499	256	1079
1:45 am	6	19	1	16	7	35	1:45 pm	162	574	126	494	288	1068
2:00 am	4	17	5	20	9	37	2:00 pm	134	530	111	486	245	1016
2:15 am	5	17	7	19	12	36	2:15 pm	154	557	136	539	290	1096
2:30 am	4	13	3	16	7	29	2:30 pm	124	542	121	569	245	1111
2:45 am	4	13	5	16	9	29	2:45 pm	118	541	118	595	236	1136
3:00 am	4	10	4	12	8	22	3:00 pm	161	546	164	647	325	1193
3:15 am	1	6	4	9	5	15	3:15 pm	139	533	166	649	305	1182
3:30 am	4	11	3	13	7	24	3:30 pm	123	550	147	665	270	1215
3:45 am	1	17	1	18	2	35	3:45 pm	123	591	170	704	293	1295
4:00 am	0	27	1	31	1	58	4:00 pm	148	629	166	708	314	1337
4:15 am	6	30	8	49	14	79	4:15 pm	156	637	182	750	338	1387
4:30 am	10	36	8	65	18	101	4:30 pm	164	641	186	785	350	1426
4:45 am	11	42	14	79	25	121	4:45 pm	161	644	174	803	335	1447
5:00 am	3	47	19	91	22	138	5:00 pm	156	663	208	871	364	1534
5:15 am	12	68	24	104	36	172	5:15 pm	160	661	217	861	377	1522
5:30 am	16	82	22	123	38	205	5:30 pm	167	661	204	818	371	1479
5:45 am	16	98	26	146	42	244	5:45 pm	180	661	242	778	422	1439
6:00 am	24	154	32	190	56	344	6:00 pm	154	631	198	712	352	1343
6:15 am	26	202	43	227	69	429	6:15 pm	160	607	174	682	334	1289
6:30 am	32	262	45	271	77	533	6:30 pm	167	568	164	674	331	1242
6:45 am	72	322	70	310	142	632	6:45 pm	150	521	176	625	326	1146
7:00 am	72	369	69	355	141	724	7:00 pm	130	500	168	591	298	1091
7:15 am	86	421	87	410	173	831	7:15 pm	121	479	166	549	287	1028
7:30 am	92	451	84	453	176	904	7:30 pm	120	451	115	475	235	926
7:45 am	119	497	115	497	234	994	7:45 pm	129	436	142	454	271	890
8:00 am	124	522	124	513	248	1035	8:00 pm	109	372	126	403	235	775
8:15 am	116	524	130	516	246	1040	8:15 pm	93	347	92	362	185	709
8:30 am	138	528	128	518	266	1046	8:30 pm	105	326	94	334	199	660
8:45 am	144	498	131	535	275	1033	8:45 pm	65	277	91	290	156	567
9:00 am	126	489	127	530	253	1019	9:00 pm	84	276	85	253	169	529
9:15 am	120	453	132	515	252	968	9:15 pm	72	245	64	227	136	472
9:30 am	108	415	145	481	253	896	9:30 pm	56	219	50	235	106	454
9:45 am	135	389	126	446	261	835	9:45 pm	64	201	54	237	118	438
10:00 am	90	342	112	422	202	764	10:00 pm	53	173	59	220	112	393
10:15 am	82	333	98	400	180	733	10:15 pm	46	152	72	191	118	343
10:30 am	82	350	110	410	192	760	10:30 pm	38	134	52	153	90	287
10:45 am	88	374	102	403	190	777	10:45 pm	36	117	37	127	73	244
11:00 am	81	401	90	419	171	820	11:00 pm	32	97	30	108	62	205
11:15 am	99	444	108	449	207	893	11:15 pm	28		34		62	
11:30 am	106	443	103	465	209	908	11:30 pm	21		26		47	
11:45 am	115	494	118	456	233	950	11:45 pm	16		18		34	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	16652	8:30 am	1046	5:00 pm	1534
N/B	7970	8:30 am	528	5:00 pm	663
S/B	8682	8:45 am	535	5:00 pm	871

Run Date: *08/25/2010*

Run Time: *9:07 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: Z85-Z88

Page: 1

Count Date: 08/14/2010 12:00 am Saturday   Condition: :   Location: ADMIRALTY WAY N/O FIJI WAY

Align Coord:

	N/B		S/B		Total			N/B		S/B		Total	
Time	15'	Hour	15'	Hour	15'	Hour	Time	15'	Hour	15'	Hour	15'	Hour
12:00 am	15	74	36	118	51	192	12:00 pm	116	564	134	586	250	1150
12:15 am	23	75	28	110	51	185	12:15 pm	138	591	152	606	290	1197
12:30 am	21	68	27	103	48	171	12:30 pm	140	601	140	574	280	1175
12:45 am	15	54	27	94	42	148	12:45 pm	170	613	160	561	330	1174
1:00 am	16	51	28	95	44	146	1:00 pm	143	587	154	563	297	1150
1:15 am	16	43	21	100	37	143	1:15 pm	148	607	120	562	268	1169
1:30 am	7	33	18	111	25	144	1:30 pm	152	597	127	584	279	1181
1:45 am	12	40	28	107	40	147	1:45 pm	144	585	162	615	306	1200
2:00 am	8	29	33	84	41	113	2:00 pm	163	588	153	608	316	1196
2:15 am	6	25	32	59	38	84	2:15 pm	138	562	142	599	280	1161
2:30 am	14	21	14	29	28	50	2:30 pm	140	574	158	621	298	1195
2:45 am	1	8	5	18	6	26	2:45 pm	147	572	155	599	302	1171
3:00 am	4	10	8	20	12	30	3:00 pm	137	548	144	608	281	1156
3:15 am	2	8	2	18	4	26	3:15 pm	150	533	164	614	314	1147
3:30 am	1	11	3	20	4	31	3:30 pm	138	519	136	584	274	1103
3:45 am	3	14	7	35	10	49	3:45 pm	123	511	164	608	287	1119
4:00 am	2	17	6	42	8	59	4:00 pm	122	510	150	590	272	1100
4:15 am	5	17	4	56	9	73	4:15 pm	136	526	134	612	270	1138
4:30 am	4	20	18	61	22	81	4:30 pm	130	515	160	628	290	1143
4:45 am	6	30	14	61	20	91	4:45 pm	122	507	146	622	268	1129
5:00 am	2	42	20	83	22	125	5:00 pm	138	490	172	610	310	1100
5:15 am	8	51	9	93	17	144	5:15 pm	125	467	150	570	275	1037
5:30 am	14	67	18	110	32	177	5:30 pm	122	453	154	546	276	999
5:45 am	18	69	36	123	54	192	5:45 pm	105	450	134	556	239	1006
6:00 am	11	74	30	133	41	207	6:00 pm	115	439	132	570	247	1009
6:15 am	24	80	26	142	50	222	6:15 pm	111	414	126	582	237	996
6:30 am	16	88	31	156	47	244	6:30 pm	119	396	164	571	283	967
6:45 am	23	102	46	171	69	273	6:45 pm	94	363	148	523	242	886
7:00 am	17	133	39	185	56	318	7:00 pm	90	353	144	463	234	816
7:15 am	32	161	40	198	72	359	7:15 pm	93	368	115	417	208	785
7:30 am	30	168	46	224	76	392	7:30 pm	86	347	116	405	202	752
7:45 am	54	184	60	246	114	430	7:45 pm	84	333	88	356	172	689
8:00 am	45	200	52	260	97	460	8:00 pm	105	335	98	356	203	691
8:15 am	39	232	66	294	105	526	8:15 pm	72	308	103	334	175	642
8:30 am	46	263	68	314	114	577	8:30 pm	72	314	67	295	139	609
8:45 am	70	287	74	338	144	625	8:45 pm	86	311	88	293	174	604
9:00 am	77	297	86	376	163	673	9:00 pm	78	279	76	266	154	545
9:15 am	70	310	86	414	156	724	9:15 pm	78	263	64	242	142	505
9:30 am	70	366	92	436	162	802	9:30 pm	69	238	65	228	134	466
9:45 am	80	394	112	460	192	854	9:45 pm	54	218	61	202	115	420
10:00 am	90	446	124	464	214	910	10:00 pm	62	201	52	193	114	394
10:15 am	126	470	108	463	234	933	10:15 pm	53	184	50	185	103	369
10:30 am	98	452	116	467	214	919	10:30 pm	49	169	39	173	88	342
10:45 am	132	464	116	488	248	952	10:45 pm	37	150	52	179	89	329
11:00 am	114	480	123	508	237	988	11:00 pm	45	143	44	159	89	302
11:15 am	108	482	112	519	220	1001	11:15 pm	38		38		76	
11:30 am	110	512	137	559	247	1071	11:30 pm	30		45		75	
11:45 am	148	542	136	562	284	1104	11:45 pm	30		32		62	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	14830	11:45 am	1104	1:45 pm	1200
N/B	6890	11:45 am	542	12:45 pm	613
S/B	7940	11:45 am	562	4:30 pm	628

Run Date: *08/25/2010*
Run Time: *9:07 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: Z93-Z96
Page: 1

Count Date: 08/12/2010 12:00 am Thursday   Condition: :   Location: ADMIRALTY WAY W/O PALAWAN WAY
Align Coord:

Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour	Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour
12:00 am	36	147	64	167	100	314	12:00 pm	220	865	218	898	438	1763
12:15 am	38	137	34	132	72	269	12:15 pm	223	827	210	872	433	1699
12:30 am	29	120	36	119	65	239	12:30 pm	194	836	218	858	412	1694
12:45 am	44	104	33	99	77	203	12:45 pm	228	860	252	866	480	1726
1:00 am	26	73	29	89	55	162	1:00 pm	182	846	192	834	374	1680
1:15 am	21	57	21	84	42	141	1:15 pm	232	847	196	892	428	1739
1:30 am	13	54	16	83	29	137	1:30 pm	218	842	226	908	444	1750
1:45 am	13	50	23	78	36	128	1:45 pm	214	840	220	897	434	1737
2:00 am	10	46	24	70	34	116	2:00 pm	183	828	250	902	433	1730
2:15 am	18	42	20	59	38	101	2:15 pm	227	893	212	873	439	1766
2:30 am	9	32	11	44	20	76	2:30 pm	216	901	215	895	431	1796
2:45 am	9	29	15	46	24	75	2:45 pm	202	933	225	936	427	1869
3:00 am	6	26	13	45	19	71	3:00 pm	248	990	221	929	469	1919
3:15 am	8	29	5	42	13	71	3:15 pm	235	1008	234	914	469	1922
3:30 am	6	32	13	47	19	79	3:30 pm	248	1029	256	952	504	1981
3:45 am	6	47	14	47	20	94	3:45 pm	259	1043	218	970	477	2013
4:00 am	9	67	10	44	19	111	4:00 pm	266	1048	206	1050	472	2098
4:15 am	11	84	10	42	21	126	4:15 pm	256	1090	272	1119	528	2209
4:30 am	21	99	13	50	34	149	4:30 pm	262	1134	274	1141	536	2275
4:45 am	26	118	11	54	37	172	4:45 pm	264	1188	298	1166	562	2354
5:00 am	26	133	8	85	34	218	5:00 pm	308	1213	275	1218	583	2431
5:15 am	26	179	18	117	44	296	5:15 pm	300	1201	294	1314	594	2515
5:30 am	40	225	17	140	57	365	5:30 pm	316	1153	299	1342	615	2495
5:45 am	41	285	42	179	83	464	5:45 pm	289	1067	350	1370	639	2437
6:00 am	72	360	40	215	112	575	6:00 pm	296	1040	371	1330	667	2370
6:15 am	72	426	41	271	113	697	6:15 pm	252	1000	322	1276	574	2276
6:30 am	100	513	56	355	156	868	6:30 pm	230	989	327	1280	557	2269
6:45 am	116	633	78	453	194	1086	6:45 pm	262	975	310	1231	572	2206
7:00 am	138	749	96	583	234	1332	7:00 pm	256	937	317	1201	573	2138
7:15 am	159	845	125	671	284	1516	7:15 pm	241	874	326	1130	567	2004
7:30 am	220	949	154	770	374	1719	7:30 pm	216	783	278	1037	494	1820
7:45 am	232	1010	208	850	440	1860	7:45 pm	224	709	280	989	504	1698
8:00 am	234	1062	184	872	418	1934	8:00 pm	193	633	246	906	439	1539
8:15 am	263	1076	224	882	487	1958	8:15 pm	150	569	233	875	383	1444
8:30 am	281	1082	234	842	515	1924	8:30 pm	142	549	230	809	372	1358
8:45 am	284	1041	230	823	514	1864	8:45 pm	148	537	197	754	345	1291
9:00 am	248	981	194	759	442	1740	9:00 pm	129	477	215	715	344	1192
9:15 am	269	952	184	743	453	1695	9:15 pm	130	464	167	634	297	1098
9:30 am	240	883	215	705	455	1588	9:30 pm	130	422	175	587	305	1009
9:45 am	224	829	166	656	390	1485	9:45 pm	88	404	158	547	246	951
10:00 am	219	803	178	669	397	1472	10:00 pm	116	398	134	501	250	899
10:15 am	200	766	146	643	346	1409	10:15 pm	88	370	120	451	208	821
10:30 am	186	734	166	659	352	1393	10:30 pm	112	355	135	401	247	756
10:45 am	198	761	179	714	377	1475	10:45 pm	82	296	112	333	194	629
11:00 am	182	791	152	746	334	1537	11:00 pm	88	256	84	277	172	533
11:15 am	168	829	162	812	330	1641	11:15 pm	73		70		143	
11:30 am	213	884	221	860	434	1744	11:30 pm	53		67		120	
11:45 am	228	865	211	857	439	1722	11:45 pm	42		56		98	

24 Hour Direction	Volume	AM Peak Hour Time	Volume	PM Peak Hour Time	Volume
Total	29874	8:15 am	1958	5:15 pm	2515
E/B	14769	8:30 am	1082	5:00 pm	1213
W/B	15105	8:15 am	882	5:45 pm	1370

Run Date: *08/25/2010*

Run Time: *9:07 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: Z93-Z96

Page: 1

Count Date: 08/14/2010 12:00 am Saturday   Condition: :   Location: ADMIRALTY WAY W/O PALAWAN WAY

Align Coord:

Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour	Time	E/B 15'	E/B Hour	W/B 15'	W/B Hour	Total 15'	Total Hour
12:00 am	75	233	78	271	153	504	12:00 pm	236	981	276	1110	512	2091
12:15 am	50	201	70	231	120	432	12:15 pm	249	979	235	1100	484	2079
12:30 am	60	208	64	209	124	417	12:30 pm	240	962	303	1108	543	2070
12:45 am	48	188	59	180	107	368	12:45 pm	256	942	296	1099	552	2041
1:00 am	43	194	38	164	81	358	1:00 pm	234	944	266	1101	500	2045
1:15 am	57	181	48	174	105	355	1:15 pm	232	955	243	1126	475	2081
1:30 am	40	150	35	158	75	308	1:30 pm	220	947	294	1161	514	2108
1:45 am	54	130	43	143	97	273	1:45 pm	258	982	298	1131	556	2113
2:00 am	30	83	48	119	78	202	2:00 pm	245	990	291	1115	536	2105
2:15 am	26	61	32	81	58	142	2:15 pm	224	1005	278	1073	502	2078
2:30 am	20	46	20	61	40	107	2:30 pm	255	1054	264	1056	519	2110
2:45 am	7	35	19	59	26	94	2:45 pm	266	1015	282	1068	548	2083
3:00 am	8	36	10	57	18	93	3:00 pm	260	1007	249	1056	509	2063
3:15 am	11	45	12	54	23	99	3:15 pm	273	991	261	1057	534	2048
3:30 am	9	44	18	55	27	99	3:30 pm	216	971	276	1034	492	2005
3:45 am	8	49	17	52	25	101	3:45 pm	258	1035	270	1048	528	2083
4:00 am	17	57	7	49	24	106	4:00 pm	244	1013	250	1078	494	2091
4:15 am	10	52	13	47	23	99	4:15 pm	253	1035	238	1088	491	2123
4:30 am	14	62	15	51	29	113	4:30 pm	280	1052	290	1067	570	2119
4:45 am	16	73	14	54	30	127	4:45 pm	236	1026	300	1022	536	2048
5:00 am	12	87	5	72	17	159	5:00 pm	266	1030	260	977	526	2007
5:15 am	20	102	17	89	37	191	5:15 pm	270	990	217	1007	487	1997
5:30 am	25	122	18	106	43	228	5:30 pm	254	989	245	1024	499	2013
5:45 am	30	127	32	120	62	247	5:45 pm	240	989	255	1023	495	2012
6:00 am	27	136	22	132	49	268	6:00 pm	226	1021	290	999	516	2020
6:15 am	40	173	34	149	74	322	6:15 pm	269	1025	234	935	503	1960
6:30 am	30	188	32	169	62	357	6:30 pm	254	960	244	884	498	1844
6:45 am	39	242	44	195	83	437	6:45 pm	272	916	231	834	503	1750
7:00 am	64	328	39	241	103	569	7:00 pm	230	846	226	786	456	1632
7:15 am	55	376	54	290	109	666	7:15 pm	204	806	183	770	387	1576
7:30 am	84	455	58	314	142	769	7:30 pm	210	798	194	751	404	1549
7:45 am	125	521	90	362	215	883	7:45 pm	202	730	183	735	385	1465
8:00 am	112	523	88	400	200	923	8:00 pm	190	693	210	738	400	1431
8:15 am	134	581	78	453	212	1034	8:15 pm	196	631	164	702	360	1333
8:30 am	150	652	106	503	256	1155	8:30 pm	142	569	178	698	320	1267
8:45 am	127	714	128	557	255	1271	8:45 pm	165	547	186	690	351	1237
9:00 am	170	813	141	612	311	1425	9:00 pm	128	516	174	656	302	1172
9:15 am	205	861	128	644	333	1505	9:15 pm	134	517	160	621	294	1138
9:30 am	212	866	160	729	372	1595	9:30 pm	120	499	170	596	290	1095
9:45 am	226	874	183	791	409	1665	9:45 pm	134	491	152	553	286	1044
10:00 am	218	870	173	832	391	1702	10:00 pm	129	465	139	505	268	970
10:15 am	210	892	213	865	423	1757	10:15 pm	116	425	135	466	251	891
10:30 am	220	900	222	902	442	1802	10:30 pm	112	394	127	435	239	829
10:45 am	222	911	224	920	446	1831	10:45 pm	108	364	104	408	212	772
11:00 am	240	913	206	956	446	1869	11:00 pm	89	330	100	384	189	714
11:15 am	218	909	250	1026	468	1935	11:15 pm	85		104		189	
11:30 am	231	940	240	1011	471	1951	11:30 pm	82		100		182	
11:45 am	224	949	260	1074	484	2023	11:45 pm	74		80		154	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	28519	11:45 am	2023	4:15 pm	2123
E/B	14109	11:45 am	949	2:30 pm	1054
W/B	14410	11:45 am	1074	1:30 pm	1161

APPENDIX D

FISHERMAN'S VILLAGE TRAFFIC STUDY 2007 COUNT DATA FROM LACDPW

Record #: 3690

Traffic Studies Section - Traffic and Lighting Division, Intersection Capacity Analysis, Intersection Capacity Utilization (ICU)

Developed and Prepared by Suen Fei LAU, Associate Civil Engineer

08/25/2010

Project Information Eir#: 07192 TG Page + Grid:	Existing Lane Configuration	Project Mitigation Measures	Cumulative Mitigation Measures
Project Name: FISHERMAN'S VILLAGE MDR PCL 55, 56 & W, Street Name 1: Street Name 2: City: MARINA DEL REY Sup Dist: 4	Fig:C1B Pg:APXC ØLnCf√D:√ Ø Ø	Fig:C1B Pg:APXC LnCf√D:√	Fig:C1B Pg:APXC LnCf√D:√
Xtn #: 9SAT > 100 % County TG Page + Grid: 672B7 N↕S St: ADMIRALTY WY E↔W St: BALI WY City: MARINA DEL REY In B&T: N> #: HPMS Segt: N Roadway #/o Ln: 2R2 ▾M Siglzd: Y CMP: N CMP Xtn #: Signal: ATCS *Signal Control System* # Phase: 3 CMC: 1425*vph* Reduction: 0.10 N ┼ N 1 RM ┼ -- 1▸ ◂3 3 Engnr: SUEN FEI LAU Fld √: Y Fld √ Date: 12/04/2001 N R▴ 2M2 √ By: NICKOLAS VANGUNST Cnt By: THE TRAFFIC SOLUTION			

a) Existing (Counts Date: 06/30/2007 Saturday)
Peak Hour: AM 12:30-01:30P InFo√D:√

Vol√D:√ 58 210 N 1,274 1,234
1,006
319 66 61 ← 165 ← 446
26 47 31 104 → 360 →
889
Fig:11 41 103 Pg:52 1,098 1,033

EbLt= 26/1600 WbTh= 66/800	=0.016 =0.083	NbLt= 41/1600 SbTh= 1064/3200	=0.026 =0.333
E↔W CRITICAL	=0.099		=0.358
WbLt= 61/1600 EbTh= 65/1600	=0.038 =0.041	SbLt= 210/1600 NbTh= 992/3200	=0.131 =0.310
	=0.079	N↕S CRITICAL	=0.441
ICU=(E↔W)0.099+(N↕S)0.441+0.1-(ATCS)0.10			=0.540

Table:13 Pg:56 Consultant V/C =0.561

b) Existing+Ambient(Growth Rate: 0.6%>Yr: 2014)

61 219 N
1,049
333 69 64
27 49 32
927
Fig:16 43 107 Pg:83

EbLt= 27/1600 WbTh= 69/800	=0.017 =0.086	NbLt= 43/1600 SbTh= 1110/3200	=0.027 =0.347
E↔W CRITICAL	=0.103		=0.374
WbLt= 64/1600 EbTh= 68/1600	=0.040 =0.042	SbLt= 219/1600 NbTh= 1034/3200	=0.137 =0.323
	=0.082	N↕S CRITICAL	=0.460
ICU=(E↔W)0.103+(N↕S)0.460+0.1-(ATCS)0.10			=0.563

Table:17 Pg:88 Consultant V/C =0.587

c) Existing+Ambient+Project (Proj » Σ = 60)

Vol√D:√ *0 0* N 61 219
Proj 35 *0 0 0* 1,084
0 0 0 333 69 64
25 *Proj* 27 49 32
952
Fig: 8 *0 0* Pg:26 Fig:18 43 107 Pg:86

EbLt= 27/1600 WbTh= 69/800	=0.017 =0.086	NbLt= 43/1600 SbTh= 1145/3200	=0.027 =0.358
E↔W CRITICAL	=0.103		=0.385
WbLt= 64/1600 EbTh= 68/1600	=0.040 =0.042	SbLt= 219/1600 NbTh= 1059/3200	=0.137 =0.331
	=0.082	N↕S CRITICAL	=0.468
ICU=(E↔W)0.103+(N↕S)0.468+0.1-(ATCS)0.10			=0.571

Table:17 Pg:88 Consultant V/C =0.596

Directional Vol:
1,364 1,102
← 466
108 →
$\triangle$c)-b)= 0.008

Significant Impact:

d) Existing+Ambient+Project+Mitigation Measures

61 219 N
1,084
333 69 64
27 49 32
952
43 107

EbLt= 27/1600 WbTh= 69/800	=0.017 =0.086	NbLt= 43/1600 SbTh= 1145/3200	=0.027 =0.358
E↔W CRITICAL	=0.103		=0.385
WbLt= 64/1600 EbTh= 68/1600	=0.040 =0.042	SbLt= 219/1600 NbTh= 1059/3200	=0.137 =0.331
	=0.082	N↕S CRITICAL	=0.468
ICU=(E↔W)0.103+(N↕S)0.468+0.1-(ATCS)0.10			=0.571

Table:26 Pg:114 Consultant V/C =NONE
$\triangle$d)-b)= 0.008 Significant Impact:

e) Existing+Ambient+Proj+M.M.+Cumulative (Cumul » Σ = 1,201)

Vol√D:√ *0 6* N 61 225
Cumul 585 *7 0 0* 1,669
0 0 0 340 69 64
603 *Cumul* 27 49 32
1,555
Fig:14 *0 0* Pg:78 Fig:20 43 107 Pg:94

EbLt= 27/1600 WbTh= 69/800	=0.017 =0.086	NbLt= 43/1600 SbTh= 1730/3200	=0.027 =0.541
E↔W CRITICAL	=0.103		=0.568
WbLt= 64/1600 EbTh= 68/1600	=0.040 =0.042	SbLt= 225/1600 NbTh= 1662/3200	=0.141 =0.519
	=0.082	N↕S CRITICAL	=0.660
ICU=(E↔W)0.103+(N↕S)0.660+0.1-(ATCS)0.10			=0.763

Table:19 Pg:97 Consultant V/C =0.804

Directional Vol:
1,955 1,705
← 473
108 →
$\triangle$e)-b)= 0.200

Significant Impact:

f) Existing+Ambient+Proj+M.M.+Cumulative+M.M.

61 225 N
1,669
340 69 64
27 49 32
1,555
FgPg√D:√ 43 107 TbPg√D:√

EbLt= 27/1600 WbTh= 69/800	=0.017 =0.086	NbLt= 43/1600 SbTh= 1730/3200	=0.027 =0.541
E↔W CRITICAL	=0.103		=0.568
WbLt= 64/1600 EbTh= 68/1600	=0.040 =0.042	SbLt= 225/1600 NbTh= 1555/3200	=0.141 =0.486
	=0.082	N↕S CRITICAL	=0.627
ICU=(E↔W)0.103+(N↕S)0.627+0.1-(ATCS)0.10			=0.730

Table:27 Pg:120 Consultant V/C =0.739
$\triangle$f)-b)=0.167 Significant Impact:

Engineer assigned this project is responsible to verify the accuracy of data entered and LOS calculations.

County of Los Angeles Methodology

#9 Note: MDB CUB pagpg1C-25ie.Wrahg AdmiwaltgnWayeWidensuȝtant stated xtn is already ATCS.
Cum mm: + ATCS.

Record #: 3691

Traffic Studies Section - Traffic and Lighting Division, Intersection Capacity Analysis, Intersection Capacity Utilization (ICU)

Developed and Prepared by Suen Fei LAU, Associate Civil Engineer

08/25/2010

Project Information Eir#: 07192 TG Page + Grid:	Existing Lane Configuration	Project Mitigation Measures	Cumulative Mitigation Measures
Project Name: FISHERMAN'S VILLAGE MDR PCL 55, 56 & W, Street Name 1: Street Name 2: City: MARINA DEL REY Sup Dist: 4	Fig:C1B Pg:APXC LnCf√D:√	Fig:C1B Pg:APXC LnCf√D:√	Fig:C1B Pg:APXC LnCf√D:√
Xtn #: 10SAT > 100 % County TG Page + Grid: 672B7 N↕S St: LINCOLN BL RT#-1 E↔W St: BALI WY City: MARINA DEL REY In B&T: N> #: HPMS Segt: N Roadway #/o Ln: 3R3 M Siglzd: Y CMP: CMP Xtn #: Signal: ATCS *Signal Control System* 3 RM 3 1 -- 1 # Phase: 4 CMC: 1375*vph* Reduction: 0.10 N N N Engnr: SUEN FEI LAU R 3M3 Fld √: Y Fld √ Date: 09/10/2003 √ By: NICKOLAS VANGUNST Cnt By: THE TRAFFIC SOLUTION	F	F	F

a) Existing (Counts Date: 06/30/2007 Saturday)
Peak Hour: AM 12:15-01:15P InFo√D:√

Vol√D:√ 352 14; 1,270; 42 0 1; 288 4 53; 1,628; 81 18; 1,636 1,958; 433 43; 345 36; 1,324 1,727

Fig:11 Pg:52

EbLt= 288/2240 WbTh= 42/1600	=0.129 =0.026	NbLt= 81/1600 SbTh= 1622/4800	=0.051 =0.338
E↔W CRITICAL	=0.155	N↕S CRITICAL	=0.389
WbLt= 1/1600 EbTh= 4/640	=0.001 =0.006	SbLt= 14/1600 NbTh= 1646/4800	=0.009 =0.343
	=0.007		=0.352
ICU=(E↔W)0.155+(N↕S)0.389+0.1-(ATCS)0.10			=0.543

Table:DISE Pg:56 Consultant V/C =0.490

b) Existing+Ambient(Growth Rate: 0.6%>Yr: 2014)

367 15; 1,324; 44 0 1; 300 4 55; 1,698; 85 19

Fig:16 Pg:83

EbLt= 300/2240 WbTh= 44/1600	=0.134 =0.028	NbLt= 85/1600 SbTh= 1691/4800	=0.053 =0.352
E↔W CRITICAL	=0.161	N↕S CRITICAL	=0.405
WbLt= 1/1600 EbTh= 4/640	=0.001 =0.006	SbLt= 15/1600 NbTh= 1717/4800	=0.009 =0.358
	=0.007		=0.367
ICU=(E↔W)0.161+(N↕S)0.405+0.1-(ATCS)0.10			=0.567

Table:17 Pg:88 Consultant V/C =0.515

c) Existing+Ambient+Project (Proj » Σ = 81)

Vol√D:√ *Proj* 0 0; 48; 0 0 0; 0 0 0; 33; 0 0; *Proj*

Fig: 8 Pg:26

367 15; 1,372; 44 0 1; 300 4 55; 1,731; 85 19

Fig:18 Pg:86

EbLt= 300/2240 WbTh= 44/1600	=0.134 =0.028	NbLt= 85/1600 SbTh= 1739/4800	=0.053 =0.362
E↔W CRITICAL	=0.161	N↕S CRITICAL	=0.415
WbLt= 1/1600 EbTh= 4/640	=0.001 =0.006	SbLt= 15/1600 NbTh= 1750/4800	=0.009 =0.365
	=0.007		=0.374
ICU=(E↔W)0.161+(N↕S)0.415+0.1-(ATCS)0.10			=0.577

Table:17 Pg:88 Consultant V/C =0.526

Directional Vol: 1,754 1,835 45 359

/\c)-b) = 0.010

Significant Impact:

d) Existing+Ambient+Project+Mitigation Measures

367 15; 1,372; 44 0 1; 300 4 55; 1,731; 85 19

EbLt= 300/2240 WbTh= 44/1600	=0.134 =0.028	NbLt= 85/1600 SbTh= 1739/4800	=0.053 =0.362
E↔W CRITICAL	=0.161	N↕S CRITICAL	=0.415
WbLt= 1/1600 EbTh= 4/640	=0.001 =0.006	SbLt= 15/1600 NbTh= 1750/4800	=0.009 =0.365
	=0.007		=0.374
ICU=(E↔W)0.161+(N↕S)0.415+0.1-(ATCS)0.10			=0.577

Table:26 Pg:114 Consultant V/C =NONE

/\d)-b)= 0.010 Significant Impact:

e) Existing+Ambient+Proj+M.M.+Cumulative (Cumul » Σ = 840)

Vol√D:√ *Cumul* 2 0; 409; 0 0 0; 3 0 3; 418; 5 0; *Cumul*

Fig:14 Pg:78

369 15; 1,781; 44 0 1; 303 4 58; 2,149; 90 19

Fig:20 Pg:94

EbLt= 303/2240 WbTh= 44/1600	=0.135 =0.028	NbLt= 90/1600 SbTh= 2150/4800	=0.056 =0.448
E↔W CRITICAL	=0.163	N↕S CRITICAL	=0.504
WbLt= 1/1600 EbTh= 4/640	=0.001 =0.006	SbLt= 15/1600 NbTh= 2168/4800	=0.009 =0.452
	=0.007		=0.461
ICU=(E↔W)0.163+(N↕S)0.504+0.1-(ATCS)0.10			=0.667

Table:19 Pg:97 Consultant V/C =0.631

Directional Vol: 2,165 2,258 45 365

/\e)-b) = 0.100

Significant Impact:

f) Existing+Ambient+Proj+M.M.+Cumulative+M.M.

369 15; 1,781; 44 0 1; 303 4 58; 2,149; 90 19

FgPg√D:√ TbPg√D:√

EbLt= 303/2240 WbTh= 44/1600	=0.135 =0.028	NbLt= 90/1600 SbTh= 1781/4800	=0.056 =0.371
E↔W CRITICAL	=0.163		=0.427
WbLt= 1/1600 EbTh= 4/640	=0.001 =0.006	SbLt= 15/1600 NbTh= 2168/4800	=0.009 =0.452
	=0.007	N↕S CRITICAL	=0.461
ICU=(E↔W)0.163+(N↕S)0.461+0.1-(ATCS)0.10			=0.624

Table:27 Pg:120 Consultant V/C =0.581

/\f)-b)=0.057 Significant Impact:

Engineer assigned this project is responsible to verify the accuracy of data entered and LOS calculations.

County of Los Angeles Methodology

#9 Note: MDR LUP page 11-15 e.1.b)4): Lincoln southbound at Bali - widen west side north of Bali Way to provide a right-turn approach lane with a 90-foot transition at Bali.

Note: Another consultant stated the xtn is 3 phase ATCS not 4.

Record #: 3692

Traffic Studies Section - Traffic and Lighting Division, Intersection Capacity Analysis, Intersection Capacity Utilization (ICU)

Developed and Prepared by Suen Fei LAU, Associate Civil Engineer

08/25/2010

Project Information Eir#: 07192 TG Page + Grid:	Existing Lane Configuration	Project Mitigation Measures	Cumulative Mitigation Measures
Project Name: FISHERMAN'S VILLAGE MDR PCL 55, 56 & W, Street Name 1: Street Name 2: City: MARINA DEL REY Sup Dist: 4	Fig:C1C Pg:APXC ØLnCf√D:√ Ø Ø Ø	Fig:C1C Pg:APXC LnCf√D:√	Fig:C1C Pg:APXC LnCf√D:√
Xtn #: 11SAT > 100 % County TG Page + Grid: 672B7 N↕S St: ADMIRALTY WY E↔W St: MINDANAO WY City: MARINA DEL REY In B&T: N> #: HPMS Segt: N Siglzd: Y CMP: N CMP Xtn #: Signal: ATCS *Signal Control System* # Phase: 3 CMC: 1425*vph* Reduction: 0.10 N + N Engnr: SUEN FEI LAU Fld √: Y Fld √ Date: 12/04/2001 N √ By: NICKOLAS VANGUNST Cnt By: THE TRAFFIC SOLUTION Roadway #/o Ln: 2R2 ▾M; 2 RM 2▸ + ◂2 RM 2; R▴ 2M2			

a) Existing (Counts Date: 06/30/2007 Saturday)
Peak Hour: AM 11:45-12:45P InFo√D:√

Vol√D:√

40 351 — N — 1,101 1,099

710

35 55 33 — 604 — 460 64 345

← 139 ← 869

123 → 598 →

Fig:11 35 192 Pg:52 1,088 831

EbLt= WbTh=	35/1600 64/640	=0.022 =0.100	NbLt= SbTh=	35/1600 750/3200	=0.022 =0.234
		=0.122			=0.256
WbLt= EbTh=	345/2240 88/1600	=0.154 =0.055	SbLt= NbTh=	351/1600 796/3200	=0.219 =0.249
E↔W CRITICAL		=0.209	N↕S CRITICAL		=0.468
ICU=(E↔W)0.209+(N↕S)0.468+0.1-(ATCS)0.10					=0.677

Table:13 Pg:56 Consultant V/C =0.687

b) Existing+Ambient(Growth Rate: 0.6%>Yr: 2014)

42 366 — N

740

37 57 34 — 480 67 360

630

Fig:16 37 200 Pg:83

EbLt= WbTh=	37/1600 67/640	=0.023 =0.105	NbLt= SbTh=	37/1600 782/3200	=0.023 =0.244
		=0.128			=0.268
WbLt= EbTh=	360/2240 91/1600	=0.161 =0.057	SbLt= NbTh=	366/1600 830/3200	=0.229 =0.259
E↔W CRITICAL		=0.218	N↕S CRITICAL		=0.488
ICU=(E↔W)0.218+(N↕S)0.488+0.1-(ATCS)0.10					=0.706

Table:17 Pg:89 Consultant V/C =0.720

c) Existing+Ambient+Project (Proj » Σ = 161)

Vol√D:√ *0 0* — N — 42 366

Proj 35 — *0 0 60* — 775

0 0 0 — 25 — *Proj* — 37 57 34 — 480 67 420

655

Fig: 8 *0 41* Pg:26 Fig:18 37 241 Pg:86

EbLt= WbTh=	37/1600 67/640	=0.023 =0.105	NbLt= SbTh=	37/1600 817/3200	=0.023 =0.255
		=0.128			=0.278
WbLt= EbTh=	420/2240 91/1600	=0.188 =0.057	SbLt= NbTh=	366/1600 896/3200	=0.229 =0.280
E↔W CRITICAL		=0.244	N↕S CRITICAL		=0.509
ICU=(E↔W)0.244+(N↕S)0.509+0.1-(ATCS)0.10					=0.753

Table:17 Pg:89 Consultant V/C =0.766

Directional Vol:
1,183 ↓ ↑ 933
← 967
128 →
$\triangle$c)-b) = 0.047

Significant Impact:

d) Existing+Ambient+Project+Mitigation Measures

42 366 — N

775

37 57 34 — 480 67 420

655

37 241

EbLt= WbTh=	37/1600 67/640	=0.023 =0.105	NbLt= SbTh=	37/1600 817/3200	=0.023 =0.255
		=0.128			=0.278
WbLt= EbTh=	420/2240 91/1600	=0.188 =0.057	SbLt= NbTh=	366/1600 896/3200	=0.229 =0.280
E↔W CRITICAL		=0.244	N↕S CRITICAL		=0.509
ICU=(E↔W)0.244+(N↕S)0.509+0.1-(ATCS)0.10					=0.753

Table:26 Pg:114 Consultant V/C =0.736
$\triangle$d)-b)= 0.047 Significant Impact:

e) Existing+Ambient+Proj+M.M.+Cumulative (Cumul » Σ = 1,288)

Vol√D:√ *1 328* — N — 43 694

Cumul *256* — *345 5 42* — 1,031

1 4 0 — *257* — *Cumul* — 38 61 34 — 825 72 462

912

Fig:14 *0 49* Pg:78 Fig:20 37 290 Pg:94

EbLt= WbTh=	38/1600 72/640	=0.024 =0.113	NbLt= SbTh=	37/1600 1074/3200	=0.023 =0.336
		=0.136			=0.359
WbLt= EbTh=	462/2240 95/1600	=0.206 =0.059	SbLt= NbTh=	694/1600 1202/3200	=0.434 =0.376
E↔W CRITICAL		=0.266	N↕S CRITICAL		=0.809
ICU=(E↔W)0.266+(N↕S)0.809+0.1-(ATCS)0.10					=1.075

Table:19 Pg:97 Consultant V/C =1.135

Directional Vol:
1,768 ↓ ↑ 1,239
← 1,359
133 →
$\triangle$e)-b) = 0.369

Significant Impact:

f) Existing+Ambient+Proj+M.M.+Cumulative+M.M.

43 694 — N

1,031

38 61 34 — 825 72 462

912

FgPg√D:√ 37 290 TbPg√D:√

EbLt= WbTh=	38/1600 439/1600	=0.024 =0.275	NbLt= SbTh=	37/1600 1074/3200	=0.023 =0.336
E↔W CRITICAL		=0.298			=0.359
WbLt= EbTh=	462/2240 95/1600	=0.206 =0.059	SbLt= NbTh=	694/2880 912/3200	=0.241 =0.285
		=0.266	N↕S CRITICAL		=0.526
ICU=(E↔W)0.298+(N↕S)0.526+0.1-(ATCS)0.10					=0.824

Table:27 Pg:120 Consultant V/C =0.901
$\triangle$f)-b)=0.119 Significant Impact:

Engineer assigned this project is responsible to verify the accuracy of data entered and LOS calculations.

County of Los Angeles Methodology

#9 Note: MDR LUP page 11-16 e.1.b)6): Admiralty northbound at Mindanao - widen east side south from Mindanao Way to provide a right-turn approach lane with a 90-foot transition at Mindanao. This is no longer feasible.
Need additional southbound left-turn lane not part of Category 1 Improvements - System-wide; convert westbound to shared lt/th/rt lane.

Note: Extg: this consultant 4 phase ATSAC.
Proj mm: ATCS (already).

Traffic Studies Section - Traffic and Lighting Division, Intersection Capacity Analysis, Intersection Capacity Utilization (ICU)

Record #: 3693 — Developed and Prepared by Suen Fei LAU, Associate Civil Engineer — 08/25/2010

Project Information Eir#: 07192 TG Page + Grid:	Existing Lane Configuration	Project Mitigation Measures	Cumulative Mitigation Measures
Project Name: FISHERMAN'S VILLAGE MDR PCL 55, 56 & W, Street Name 1: Street Name 2: City: MARINA DEL REY Sup Dist: 4	Fig:C1C Pg:APXC LnCf√D:√ ø	Fig:C1C Pg:APXC LnCf√D:√	Fig:C1C Pg:APXC LnCf√D:√
Xtn #: 12SAT > 50 % County TG Page + Grid: 672B7 N↕S St: LINCOLN BL RT#-1 E↔W St: MINDANAO WY City: MARINA DEL REY In B&T: N> #: HPMS Segt: N Roadway #/o Ln: 3R3 ▾M Siglzd: Y CMP: CMP Xtn #: Signal: ATCS *Signal Control System* # Phase: 4 CMC: 1375*vph* Reduction: 0.10 N + N 2 RM 2▸ + ◂2 -- 2 Engnr: SUEN FEI LAU Fld √: Y Fld √ Date: 03/11/2009 N R▴ 3M3 √ By: ISAAC WONG Cnt By: THE TRAFFIC SOLUTION			

a) Existing (Counts Date: 06/30/2007 Saturday)
Peak Hour: AM 12:15-01:15P InFo√D:√

Vol√D:√ 156 130 N 1,383 1,707

1,097 112 635 291 ← 889 ←1,038

0 521 116 637 → 899 →

1,595

Fig:11 98 248 Pg:52 1,504 1,941

EbLt= 0/0 WbTh= 747/3200	=0.000 =0.233	NbLt= 98/1600 SbTh= 1253/4800	=0.061 =0.261
	=0.233		=0.322
WbLt= 291/2880 EbTh= 637/3200	=0.101 =0.199	SbLt= 130/1600 NbTh= 1843/4800	=0.081 =0.384
E↔W CRITICAL	=0.300	N↕S CRITICAL	=0.465
ICU=(E↔W)0.300+(N↕S)0.465+0.1-(ATCS)0.10			=0.765

Table:13 Pg:56 Consultant V/C =0.729

b) Existing+Ambient(Growth Rate: 0.6%>Yr: 2014)

163 136 N

1,144 117 662 303

0 543 121

1,663

Fig:16 102 259 Pg:83

EbLt= 0/0 WbTh= 779/3200	=0.000 =0.243	NbLt= 102/1600 SbTh= 1307/4800	=0.064 =0.272
	=0.243		=0.336
WbLt= 303/2880 EbTh= 664/3200	=0.105 =0.208	SbLt= 136/1600 NbTh= 1922/4800	=0.085 =0.400
E↔W CRITICAL	=0.313	N↕S CRITICAL	=0.485
ICU=(E↔W)0.313+(N↕S)0.485+0.1-(ATCS)0.10			=0.798

Table:17 Pg:89 Consultant V/C =0.765

c) Existing+Ambient+Project (Proj » Σ = 221)

Vol√D:√ 0 0 N 163 136 N

Proj 48 0 60 23 1,192 117 722 326

0 41 0 33 *Proj* 0 584 121

1,696

Fig: 8 0 16 Pg:26 Fig:18 102 275 Pg:86

Directional Vol:

1,491 2,073

705 ← 1,165

Δc)-b) = 0.031

Significant Impact: NO

EbLt= 0/0 WbTh= 839/3200	=0.000 =0.262	NbLt= 102/1600 SbTh= 1355/4800	=0.064 =0.282
	=0.262		=0.346
WbLt= 326/2880 EbTh= 705/3200	=0.113 =0.220	SbLt= 136/1600 NbTh= 1971/4800	=0.085 =0.411
E↔W CRITICAL	=0.334	N↕S CRITICAL	=0.496
ICU=(E↔W)0.334+(N↕S)0.496+0.1-(ATCS)0.10			=0.829

Table:17 Pg:89 Consultant V/C =0.796

d) Existing+Ambient+Project+Mitigation Measures

163 136 N

1,192 117 722 326

0 584 121

1,696

102 275

EbLt= 0/0 WbTh= 839/3200	=0.000 =0.262	NbLt= 102/1600 SbTh= 1355/4800	=0.064 =0.282
	=0.262		=0.346
WbLt= 326/2880 EbTh= 705/3200	=0.113 =0.220	SbLt= 136/1600 NbTh= 1971/4800	=0.085 =0.411
E↔W CRITICAL	=0.334	N↕S CRITICAL	=0.496
ICU=(E↔W)0.334+(N↕S)0.496+0.1-(ATCS)0.10			=0.829

Table:26 Pg:114 Consultant V/C =NONE

Δd)-b)= 0.031 Significant Impact:

e) Existing+Ambient+Proj+M.M.+Cumulative (Cumul » Σ = 1,717)

Vol√D:√ 4 3 N 167 139 N

Cumul 405 0 384 54 1,597 117 1,106 380

0 378 3 423 *Cumul* 0 962 124

2,119

Fig:14 4 59 Pg:78 Fig:20 106 334 Pg:94

Directional Vol:

1,903 2,559

1,086 ← 1,603

Δe)-b) = 0.271

Significant Impact: YES

EbLt= 0/0 WbTh= 1223/3200	=0.000 =0.382	NbLt= 106/1600 SbTh= 1764/4800	=0.066 =0.368
	=0.382		=0.434
WbLt= 380/2880 EbTh= 1086/3200	=0.132 =0.339	SbLt= 139/1600 NbTh= 2453/4800	=0.087 =0.511
E↔W CRITICAL	=0.471	N↕S CRITICAL	=0.598
ICU=(E↔W)0.471+(N↕S)0.598+0.1-(ATCS)0.10			=1.069

Table:19 Pg:97 Consultant V/C =1.061

f) Existing+Ambient+Proj+M.M.+Cumulative+M.M.

167 139 N

1,597 117 1,106 380

0 962 124

2,119

FgPg√D:√ 106 334 TbPg√D:√

EbLt= 0/0 WbTh= 1223/3200	=0.000 =0.382	NbLt= 106/1600 SbTh= 1764/4800	=0.066 =0.368
	=0.382		=0.434
WbLt= 380/2880 EbTh= 1086/3200	=0.132 =0.339	SbLt= 139/1600 NbTh= 2453/4800	=0.087 =0.511
E↔W CRITICAL	=0.471	N↕S CRITICAL	=0.598
ICU=(E↔W)0.471+(N↕S)0.598+0.1-(ATCS)0.10			=1.069

Table:27 Pg:120 Consultant V/C =NO FM

Δf)-b)=0.271 Significant Impact:

Engineer assigned this project is responsible to verify the accuracy of data entered and LOS calculations. **County of Los Angeles Methodology**

#9 Note: MDR LUP page 11-15 e.1.b)5): Lincoln northbound at Mindanao - widen west side both north and south of Mindanao Way, relocate and narrow the median island, to provide for right-turn lane at or through lane at Mindanao (already in place as of 06/08).

Note: Extg: NB right-turn overlap phase for future condition (1 lt, 3 th & 1 rt)and should not be use as existing.
Cm: No feasible mitigation.

Traffic Studies Section - Traffic and Lighting Division, Intersection Capacity Analysis, Intersection Capacity Utilization (ICU)

Record #: 3704 — Developed and Prepared by Suen Fei LAU, Associate Civil Engineer — 08/25/2010

Project Information Eir#: 07192 TG Page + Grid:	Existing Lane Configuration	Project Mitigation Measures	Cumulative Mitigation Measures
Project Name: FISHERMAN'S VILLAGE MDR PCL 55, 56 & W, Street Name 1: Street Name 2: City: MARINA DEL REY Sup Dist: 4	Fig:C1C Pg:APXC ØLnCf√D:√ Ø Ø F	Fig:C1C Pg:APXC LnCf√D:√ F	Fig:C1C Pg:APXC LnCf√D:√ F
Xtn #: 13SAT > 100 % County TG Page + Grid: 672B7 N↕S St: ADMIRALTY WY E↔W St: FIJI WY City: MARINA DEL REY In B&T: N> #: HPMS Segt: N Roadway #/o Ln: 2R2 ▾M Siglzd: Y CMP: N CMP Xtn #: Signal: ATCS *Signal Control System* 2 ◂2 # Phase: 2 CMC: 1500*vph* Reduction: 0.10 N ┼ N RM ┼ RM Engnr: SUEN FEI LAU 2▸ 2 Fld √: Y Fld √ Date: 12/04/2001 N :▴ √ By: NICKOLAS VANGUNST 0:0 Cnt By: THE TRAFFIC SOLUTION			

a) Existing (Counts Date: 06/30/2007 Saturday)
Peak Hour: AM 12:15-01:15P InFo√D:√

Vol√D:√ 197 660 N 857 565

463 176 0 ← 373 ← 639

102 189 0 291 → 849 →

Fig:11 0 0 Pg:52 0 0

EbLt= 102/1600 WbTh= 176/1600	=0.064 =0.110	NbLt= 0/0 SbTh= 95/1600	=0.000 =0.059
E↔W CRITICAL	=0.174		=0.059
WbLt= 0/0 EbTh= 189/3200	=0.000 =0.059	SbLt= 660/2880 NbTh= 0/0	=0.229 =0.000
	=0.059	N↕S CRITICAL	=0.229
ICU=(E↔W)0.174+(N↕S)0.229+0.1-(ATCS)0.10			=0.403

Table:13 Pg:56 Consultant V/C =0.357

b) Existing+Ambient(Growth Rate: 0.6%>Yr: 2014)

205 688 N

0

106 197 0 483 184 0

Fig:16 0 0 0 Pg:83

EbLt= 106/1600 WbTh= 184/1600	=0.066 =0.115	NbLt= 0/0 SbTh= 99/1600	=0.000 =0.062
E↔W CRITICAL	=0.181		=0.062
WbLt= 0/0 EbTh= 197/3200	=0.000 =0.062	SbLt= 688/2880 NbTh= 0/0	=0.239 =0.000
	=0.062	N↕S CRITICAL	=0.239
ICU=(E↔W)0.181+(N↕S)0.239+0.1-(ATCS)0.10			=0.420

Table:17 Pg:89 Consultant V/C =0.375

c) Existing+Ambient+Project (Proj » Σ = 403)

Vol√D:√ 95 0 N 300 688 N

Proj 0 0 143 0 0 483 327 0

66 99 0 0 *Proj* 172 296 0 0

Fig: 8 0 0 Pg:26 Fig:18 0 0 Pg:86

EbLt= 172/1600 WbTh= 327/1600	=0.108 =0.204	NbLt= 0/0 SbTh= 128/1600	=0.000 =0.080
E↔W CRITICAL	=0.312		=0.080
WbLt= 0/0 EbTh= 296/3200	=0.000 =0.093	SbLt= 688/2880 NbTh= 0/0	=0.239 =0.000
	=0.093	N↕S CRITICAL	=0.239
ICU=(E↔W)0.312+(N↕S)0.239+0.1-(ATCS)0.10			=0.551

Table:17 Pg:89 Consultant V/C =0.515

Directional Vol:
988 0
468 → ← 810
$\triangle$c)-b)= 0.131

Significant Impact:

d) Existing+Ambient+Project+Mitigation Measures

300 688 N

0

172 296 0 483 327 0

0 0 0

EbLt= 172/1600 WbTh= 327/1600	=0.108 =0.204	NbLt= 0/0 SbTh= 128/1600	=0.000 =0.080
E↔W CRITICAL	=0.312		=0.080
WbLt= 0/0 EbTh= 296/3200	=0.000 =0.093	SbLt= 688/2880 NbTh= 0/0	=0.239 =0.000
	=0.093	N↕S CRITICAL	=0.239
ICU=(E↔W)0.312+(N↕S)0.239+0.1-(ATCS)0.10			=0.551

Table:26 Pg:114 Consultant V/C =NONE
$\triangle$d)-b)= 0.131 Significant Impact:

e) Existing+Ambient+Proj+M.M.+Cumulative (Cumul » Σ = 709)

Vol√D:√ 45 253 N 345 941 N

Cumul 0 255 48 0 0 738 375 0

51 57 0 0 *Cumul* 223 353 0 0

Fig:14 0 0 Pg:78 Fig:20 0 0 Pg:94

EbLt= 223/1600 WbTh= 375/1600	=0.139 =0.234	NbLt= 0/0 SbTh= 122/1600	=0.000 =0.076
E↔W CRITICAL	=0.374		=0.076
WbLt= 0/0 EbTh= 353/3200	=0.000 =0.110	SbLt= 941/2880 NbTh= 0/0	=0.327 =0.000
	=0.110	N↕S CRITICAL	=0.327
ICU=(E↔W)0.374+(N↕S)0.327+0.1-(ATCS)0.10			=0.700

Table:19 Pg:97 Consultant V/C =0.674

Directional Vol:
1,286 0
576 → ← 1,113
$\triangle$e)-b)= 0.280

Significant Impact:

f) Existing+Ambient+Proj+M.M.+Cumulative+M.M.

345 941 N

0

223 353 0 738 375 0

FgPg√D:√ 0 0 0 TbPg√D:N

EbLt= 223/1600 WbTh= 375/1600	=0.139 =0.234	NbLt= 0/0 SbTh= 122/1600	=0.000 =0.076
E↔W CRITICAL	=0.374		=0.076
WbLt= 0/0 EbTh= 353/3200	=0.000 =0.110	SbLt= 941/2880 NbTh= 0/0	=0.327 =0.000
	=0.110	N↕S CRITICAL	=0.327
ICU=(E↔W)0.374+(N↕S)0.327+0.1-(ATCS)0.10			=0.700

Table:27 Pg:120> Consultant V/C =
$\triangle$f)-b)=0.280 Significant Impact:

Engineer assigned this project is responsible to verify the accuracy of data entered and LOS calculations. **County of Los Angeles Methodology**

#9 Note: MDR LUP page 11-15 e.1.b)7): Admiralty southbound at Fiji - Widen west side north from Fiji Way to provide for three through lanes.

Record #: 3705

Traffic Studies Section - Traffic and Lighting Division, Intersection Capacity Analysis, Intersection Capacity Utilization (ICU)

Developed and Prepared by Suen Fei LAU, Associate Civil Engineer

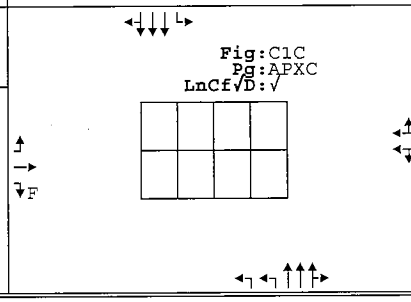
08/25/2010

Project Information Eir#: 07192 TG Page + Grid:

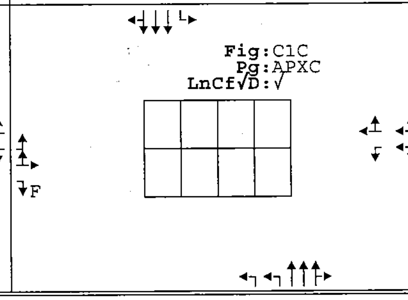
Project Name: FISHERMAN'S VILLAGE MDR PCL 55, 56 & W,
Street Name 1:
Street Name 2:
City: MARINA DEL REY Sup Dist: 4

Xtn #: 14SAT > 50 % County TG Page + Grid: 672C7
N↕S St: LINCOLN BL RT#-1
E↔W St: FIJI WY
City: MARINA DEL REY
In B&T: N> #: HPMS Segt: N Roadway #/o Ln: 3R3 ▾M
Siglzd: Y CMP: CMP Xtn #:
Signal: ATCS *Signal Control System*
\# Phase: 4 CMC: 1375*vph* Reduction: 0.00 N ┼ N 2 RM 2▸ ◂1 -- 1
Engnr: SUEN FEI LAU
Fld √: Y Fld √ Date: 09/10/2003 N :▴ 3:2
√ By: NICKOLAS VANGUNST
Cnt By: THE TRAFFIC SOLUTION

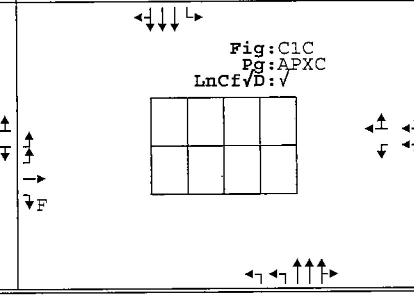
Existing Lane Configuration



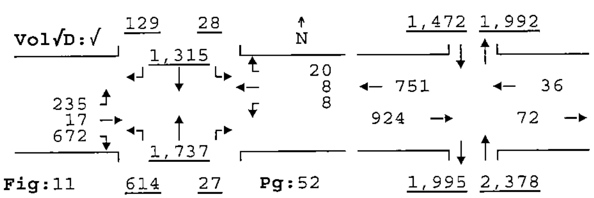
Project Mitigation Measures



Cumulative Mitigation Measures



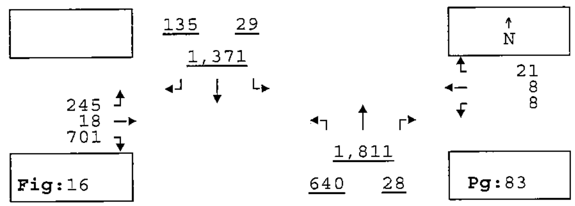
a) Existing (Counts Date: 06/30/2007 Saturday)
Peak Hour: AM 12:15-01:15P InFo√D:√



EbLt= 235/1600 WbTh= 26/1600	=0.147 =0.016	NbLt= 614/2880 SbTh= 1444/4800	=0.213 =0.301
E↔W CRITICAL	=0.163	N↕S CRITICAL	=0.514
WbLt= 8/1600 EbTh= 331/9999	=0.005 =0.033	SbLt= 28/1600 NbTh= 1764/4800	=0.018 =0.368
	=0.038		=0.385
ICU=(E↔W)0.163+(N↕S)0.514+0.1-(ATCS)0.00			=0.777

Table:13 Pg:56 Consultant V/C =0.759

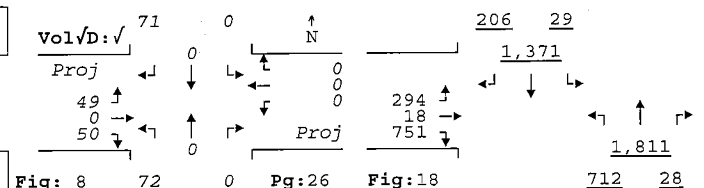
b) Existing+Ambient(Growth Rate: 0.6%>Yr: 2014)



EbLt= 245/1600 WbTh= 27/1600	=0.153 =0.017	NbLt= 640/2880 SbTh= 1506/4800	=0.222 =0.314
E↔W CRITICAL	=0.170	N↕S CRITICAL	=0.536
WbLt= 8/1600 EbTh= 345/9999	=0.005 =0.035	SbLt= 29/1600 NbTh= 1839/4800	=0.018 =0.383
	=0.040		=0.401
ICU=(E↔W)0.170+(N↕S)0.536+0.1-(ATCS)0.00			=0.806

Table:17 Pg:89 Consultant V/C =0.795

c) Existing+Ambient+Project (Proj » Σ = 242)



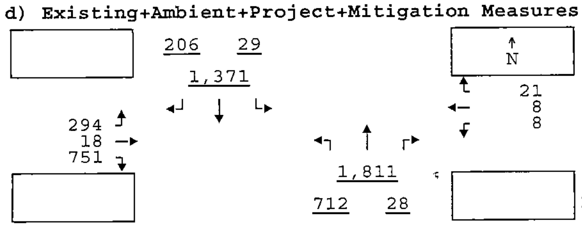
Directional Vol:
1,606
2,551
← 37
1,063 →
$\triangle$c)-b) = 0.070

EbLt= 294/1600 WbTh= 27/1600	=0.184 =0.017	NbLt= 712/2880 SbTh= 1577/4800	=0.247 =0.329
E↔W CRITICAL	=0.200	N↕S CRITICAL	=0.576
WbLt= 8/1600 EbTh= 355/9999	=0.005 =0.036	SbLt= 29/1600 NbTh= 1839/4800	=0.018 =0.383
	=0.041		=0.401
ICU=(E↔W)0.200+(N↕S)0.576+0.1-(ATCS)0.00			=0.876

Table:17 Pg:89 Consultant V/C =0.831

Significant Impact: YES

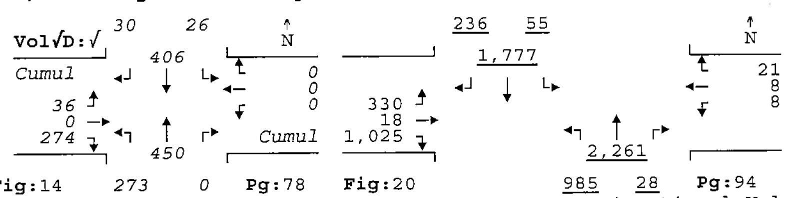
d) Existing+Ambient+Project+Mitigation Measures



EbLt= 294/2240 WbTh= 27/1600	=0.131 =0.017	NbLt= 712/2880 SbTh= 1577/4800	=0.247 =0.329
E↔W CRITICAL	=0.148	N↕S CRITICAL	=0.576
WbLt= 8/1600 EbTh= 355/9999	=0.005 =0.036	SbLt= 29/1600 NbTh= 1839/4800	=0.018 =0.383
	=0.041		=0.401
ICU=(E↔W)0.148+(N↕S)0.576+0.1-(ATCS)0.00			=0.824

Table:26 Pg:114 Consultant V/C =0.731
$\triangle$d)-b)= 0.018 Significant Impact:

e) Existing+Ambient+Proj+M.M.+Cumulative (Cumul » Σ = 1,495)



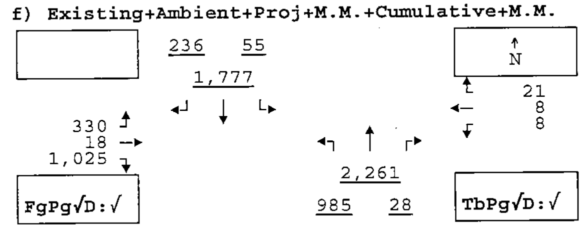
Directional Vol:
2,068
3,274
← 37
1,373 →
$\triangle$e)-b) = 0.221

EbLt= 330/2240 WbTh= 29/1600	=0.147 =0.018	NbLt= 985/2880 SbTh= 2013/4800	=0.342 =0.419
E↔W CRITICAL	=0.165	N↕S CRITICAL	=0.761
WbLt= 8/1600 EbTh= 478/9999	=0.005 =0.048	SbLt= 55/1600 NbTh= 2289/4800	=0.034 =0.477
	=0.053		=0.511
ICU=(E↔W)0.165+(N↕S)0.761+0.1-(ATCS)0.00			=1.027

Table:19 Pg:97 Consultant V/C =1.049

Significant Impact: YES

f) Existing+Ambient+Proj+M.M.+Cumulative+M.M.



EbLt= 330/2880 WbTh= 29/1600	=0.115 =0.018	NbLt= 985/2880 SbTh= 2013/4800	=0.342 =0.419
E↔W CRITICAL	=0.133	N↕S CRITICAL	=0.761
WbLt= 8/1600 EbTh= 478/9999	=0.005 =0.048	SbLt= 55/1600 NbTh= 2289/4800	=0.034 =0.477
	=0.053		=0.511
ICU=(E↔W)0.133+(N↕S)0.761+0.1-(ATCS)0.00			=0.994

Table:27 Pg:120 Consultant V/C =0.930
$\triangle$f)-b)=0.188 Significant Impact:

Engineer assigned this project is responsible to verify the accuracy of data entered and LOS calculations.

County of Los Angeles Methodology

#9 Note: MDR LUP page 11-16 e.1.b)8): Fiji Way eastbound at Lincoln - widen the south side of Fiji to accommodate an additional eastbound left-turn lane.
Additional analysis since the above-mentioned MM may not be feasible.

Note: Extg: Report > Nb: 2 lt, 1 th & 1 str and Wb: 1 sltrt.
Pm: Report > Nb: 2 lt, 1 th & 1 str and Wb: 1 sltrt.
Cm: Report > Nb: 2 lt, 1 th & 1 str.

Traffic Studies Section - Traffic and Lighting Division, Intersection Capacity Analysis, Intersection Capacity Utilization (ICU)

Record #: 3707 — Developed and Prepared by Suen Fei LAU, Associate Civil Engineer — 08/25/2010

Project Information Eir#: 07192 TG Page + Grid:	Existing Lane Configuration	Project Mitigation Measures	Cumulative Mitigation Measures
Project Name: FISHERMAN'S VILLAGE MDR PCL 55, 56 & W, Street Name 1: Street Name 2: City: LOS ANGELES CITY Sup Dist: X	Fig:C1C Pg:APXC LnCf√D:√	Fig:C1C Pg:APXC LnCf√D:√	Fig:C1C Pg:APXC LnCf√D:√
Xtn #: 15SAT > 0 % County TG Page + Grid: 672B7 N↕S St: MARINA EXWY RT#-90 EB E↔W St: MINDANAO WY City: LOS ANGELES CITY In B&T: N> #: HPMS Segt: N Roadway #/o Ln: 0:0 Siglzd: Y CMP: CMP Xtn #: Signal: ATCS *Signal Control System* # Phase: 3 CMC: 1425*vph* Reduction: 0.10 N + N 0 0 -- + -- 0 0 Engnr: SUEN FEI LAU N 0:0 Fld √: Y Fld √ Date: / / √ By: "NOT CHECKED" Cnt By: THE TRAFFIC SOLUTION			

a) Existing (Counts Date: 06/30/2007 Saturday)
Peak Hour: AM 01:45-02:45P InFo√D:√

Vol√D:√ 30 782 48 N 860 0
0 382 521 | 0 999 404 | ←1,029 903 → | ←1,403 430 →
Fig:11 0 0 Pg:52 1,707 0

EbLt= 0/0 WbTh= 999/3200	=0.000 =0.312	NbLt= 0/0 SbTh= 812/3200	=0.000 =0.254
	=0.312	N↕S CRITICAL	=0.254
WbLt= 404/1600 EbTh= 521/2400	=0.253 =0.217	SbLt= 48/1600 NbTh= 0/0	=0.030 =0.000
E↔W CRITICAL	=0.470		=0.030
ICU=(E↔W)0.470+(N↕S)0.254+0.1-(ATCS)0.10			=0.723

Table:13 Pg:56 Consultant V/C =0.552

b) Existing+Ambient(Growth Rate: 0.6%>Yr: 2014)

31 815 50 N
0 398 543 | 0 1,042 421
Fig:16 0 0 Pg:83

EbLt= 0/0 WbTh= 1042/3200	=0.000 =0.326	NbLt= 0/0 SbTh= 846/3200	=0.000 =0.264
	=0.326	N↕S CRITICAL	=0.264
WbLt= 421/1600 EbTh= 543/2400	=0.263 =0.226	SbLt= 50/1600 NbTh= 0/0	=0.031 =0.000
E↔W CRITICAL	=0.489		=0.031
ICU=(E↔W)0.489+(N↕S)0.264+0.1-(ATCS)0.10			=0.754

Table:17 Pg:89 Consultant V/C =0.580

c) Existing+Ambient+Project (Proj » Σ = 140)

Vol√D:√ 0 0 0 N | 31 815 50 N
Proj 0 8 49 | 0 83 0 *Proj* | 0 406 592 | 0 1,125 421
Fig: 8 0 0 Pg:26 Fig:18 0 0 Pg:86

EbLt= 0/0 WbTh= 1125/3200	=0.000 =0.352	NbLt= 0/0 SbTh= 846/3200	=0.000 =0.264
	=0.352	N↕S CRITICAL	=0.264
WbLt= 421/1600 EbTh= 592/2400	=0.263 =0.247	SbLt= 50/1600 NbTh= 0/0	=0.031 =0.000
E↔W CRITICAL	=0.510		=0.031
ICU=(E↔W)0.510+(N↕S)0.264+0.1-(ATCS)0.10			=0.774

Table:17 Pg:89 Consultant V/C =0.593

Directional Vol:
896 ↓ 0 ↑
998 → ← 1,546
/\c)-b) = 0.020

Significant Impact: NO

d) Existing+Ambient+Project+Mitigation Measures

31 815 50 N
0 406 592 | 0 1,125 421
0 0

EbLt= 0/0 WbTh= 1125/3200	=0.000 =0.352	NbLt= 0/0 SbTh= 846/3200	=0.000 =0.264
	=0.352	N↕S CRITICAL	=0.264
WbLt= 421/1600 EbTh= 592/2400	=0.263 =0.247	SbLt= 50/1600 NbTh= 0/0	=0.031 =0.000
E↔W CRITICAL	=0.510		=0.031
ICU=(E↔W)0.510+(N↕S)0.264+0.1-(ATCS)0.10			=0.774

Table:26 Pg:114 Consultant V/C =NONE
/\d)-b)= 0.020 Significant Impact:

e) Existing+Ambient+Proj+M.M.+Cumulative (Cumul » Σ = 1,249)

Vol√D:√ 0 309 14 N | 31 1,124 64 N
Cumul 0 80 360 | 0 438 48 *Cumul* | 0 486 952 | 0 1,563 469
Fig:14 0 0 Pg:78 Fig:20 0 0 Pg:94

EbLt= 0/0 WbTh= 1563/3200	=0.000 =0.488	NbLt= 0/0 SbTh= 1155/3200	=0.000 =0.361
	=0.488	N↕S CRITICAL	=0.361
WbLt= 469/1600 EbTh= 952/2400	=0.293 =0.397	SbLt= 64/1600 NbTh= 0/0	=0.040 =0.000
E↔W CRITICAL	=0.690		=0.040
ICU=(E↔W)0.690+(N↕S)0.361+0.1-(ATCS)0.10			=1.051

Table:19 Pg:97 Consultant V/C =0.854

Directional Vol:
1,219 ↓ 0 ↑
1,438 → ← 2,032
/\e)-b) = 0.297

Significant Impact: YES

f) Existing+Ambient+Proj+M.M.+Cumulative+M.M.

31 1,124 64 N
0 486 952 | 0 1,563 469
FgPg√D:√ 0 0 TbPg√D:√

EbLt= 0/0 WbTh= 1563/3200	=0.000 =0.488	NbLt= 0/0 SbTh= 1155/3200	=0.000 =0.361
	=0.488	N↕S CRITICAL	=0.361
WbLt= 469/1600 EbTh= 952/2400	=0.293 =0.397	SbLt= 64/1600 NbTh= 0/0	=0.040 =0.000
E↔W CRITICAL	=0.690		=0.040
ICU=(E↔W)0.690+(N↕S)0.361+0.1-(ATCS)0.10			=1.051

Table:27 Pg:120 Consultant V/C =NO FM
/\f)-b)=0.297 Significant Impact:

Engineer assigned this project is responsible to verify the accuracy of data entered and LOS calculations.

County of Los Angeles Methodology

#9 Note: ATCS, Green
Extg: Report > Wb: 2 lt & 2 th.
Cm: No feasible mitigation.

Traffic Studies Section - Traffic and Lighting Division, Intersection Capacity Analysis, Intersection Capacity Utilization (ICU)

Record #: 3706 — Developed and Prepared by Suen Fei LAU, Associate Civil Engineer — 08/25/2010

Project Information Eir#: 07192 TG Page + Grid:	Existing Lane Configuration	Project Mitigation Measures	Cumulative Mitigation Measures
Project Name: FISHERMAN'S VILLAGE MDR PCL 55, 56 & W, Street Name 1: Street Name 2: City: LOS ANGELES CITY Sup Dist: X	Fig:C1D Pg:APXC LnCf√D:√	Fig:C1D Pg:APXC LnCf√D:√	Fig:C1D Pg:APXC LnCf√D:√
Xtn #: 16SAT > 0 % County TG Page + Grid: 672B6 N↕S St: MARINA EXWY RT#-90 WB E↔W St: MINDANAO WY City: LOS ANGELES CITY HPMS Segt: N Roadway #/o Ln: 0:0 In B&T: N> #: Siglzd: Y CMP: CMP Xtn #: Signal: ATCS *Signal Control System* # Phase: 3 CMC: 1425*vph* Reduction: 0.10 N + N Engnr: SUEN FEI LAU Fld √: Y Fld √ Date: / / N √ By: "NOT CHECKED" 0:0 Cnt By: THE TRAFFIC SOLUTION			

a) Existing (Counts Date: 06/30/2007 Saturday)
Peak Hour: AM 01:45-02:45P InFo√D:√

Vol√D:√ — SB: 0 0 0; WB: 38 909 0; EB: 23 395 0; NB: 1,025; 469 341; ←1,378 418 →; 0 1,086; ← 947 736 →; 0 1,835

Fig:11 Pg:52

EbLt= 23/1600 WbTh= 947/3200	=0.014 =0.296	NbLt= 469/2240 SbTh= 0/0	=0.209 =0.000
E↔W CRITICAL	=0.310		=0.209
WbLt= 0/0 EbTh= 395/3200	=0.000 =0.123	SbLt= 0/0 NbTh= 1025/2240	=0.000 =0.458
	=0.123	N↕S CRITICAL	=0.458
ICU=(E↔W)0.310+(N↕S)0.458+0.1-(ATCS)0.10			=0.768

Table:13 Pg:56 Consultant V/C =0.497

b) Existing+Ambient(Growth Rate: 0.6%>Yr: 2014)

SB: 0 0 0; WB: 40 948 0; EB: 24 412 0; NB: 1,069; 489 356

Fig:16 Pg:83

EbLt= 24/1600 WbTh= 988/3200	=0.015 =0.309	NbLt= 489/2240 SbTh= 0/0	=0.218 =0.000
E↔W CRITICAL	=0.324		=0.218
WbLt= 0/0 EbTh= 412/3200	=0.000 =0.129	SbLt= 0/0 NbTh= 1069/2240	=0.000 =0.477
	=0.129	N↕S CRITICAL	=0.477
ICU=(E↔W)0.324+(N↕S)0.477+0.1-(ATCS)0.10			=0.801

Table:17 Pg:89 Consultant V/C =0.522

c) Existing+Ambient+Project (Proj » Σ = 91)

Vol√D:√ *Proj* — SB: *0 0 0*; WB: *0 12 0*; EB: *0 8 0*; NB: *0*; *71 0* *Proj*

Fig: 8 Pg:26

SB: 0 0 0; WB: 40 960 0; EB: 24 420 0; NB: 1,069; 560 356

Fig:18 Pg:86

EbLt= 24/1600 WbTh= 1000/3200	=0.015 =0.313	NbLt= 560/2240 SbTh= 0/0	=0.250 =0.000
E↔W CRITICAL	=0.328		=0.250
WbLt= 0/0 EbTh= 420/3200	=0.000 =0.131	SbLt= 0/0 NbTh= 1069/2240	=0.000 =0.477
	=0.131	N↕S CRITICAL	=0.477
ICU=(E↔W)0.328+(N↕S)0.477+0.1-(ATCS)0.10			=0.805

Table:17 Pg:89 Consultant V/C =0.532

Directional Vol: 0 ↓ 1,985 ↑ ← 1,000 444 → $\triangle$c)-b) = 0.004

Significant Impact: YES

d) Existing+Ambient+Project+Mitigation Measures

SB: 0 0 0; WB: 40 960 0; EB: 24 420 0; NB: 1,069; 560 356

EbLt= 24/1600 WbTh= 1000/3200	=0.015 =0.313	NbLt= 560/2240 SbTh= 0/0	=0.250 =0.000
E↔W CRITICAL	=0.328		=0.250
WbLt= 0/0 EbTh= 420/3200	=0.000 =0.131	SbLt= 0/0 NbTh= 1069/2240	=0.000 =0.477
	=0.131	N↕S CRITICAL	=0.477
ICU=(E↔W)0.328+(N↕S)0.477+0.1-(ATCS)0.10			=0.805

Table:26 Pg:114 Consultant V/C =NONE
$\triangle$d)-b)= 0.004 Significant Impact:

e) Existing+Ambient+Proj+M.M.+Cumulative (Cumul » Σ = 1,002)

Vol√D:√ *Cumul* — SB: *0 0 0*; WB: *16 125 0*; EB: *0 94 0*; NB: *351*; *361 55* *Cumul*

Fig:14 Pg:78

SB: 0 0 0; WB: 56 1,085 0; EB: 24 514 0; NB: 1,420; 921 411

Fig:20 Pg:94

EbLt= 24/1600 WbTh= 1141/3200	=0.015 =0.357	NbLt= 921/2240 SbTh= 0/0	=0.411 =0.000
E↔W CRITICAL	=0.372		=0.411
WbLt= 0/0 EbTh= 514/3200	=0.000 =0.161	SbLt= 0/0 NbTh= 1420/2240	=0.000 =0.634
	=0.161	N↕S CRITICAL	=0.634
ICU=(E↔W)0.372+(N↕S)0.634+0.1-(ATCS)0.10			=1.005

Table:19 Pg:97 Consultant V/C =0.731

Directional Vol: 0 ↓ 2,752 ↑ ← 1,141 538 → $\triangle$e)-b) = 0.205

Significant Impact: YES

f) Existing+Ambient+Proj+M.M.+Cumulative+M.M.

SB: 0 0 0; WB: 56 1,085 0; EB: 24 514 0; NB: 1,420; 921 411

FgPg√D:√ TbPg√D:√

EbLt= 24/1600 WbTh= 1141/3200	=0.015 =0.357	NbLt= 921/2240 SbTh= 0/0	=0.411 =0.000
E↔W CRITICAL	=0.372		=0.411
WbLt= 0/0 EbTh= 514/3200	=0.000 =0.161	SbLt= 0/0 NbTh= 1420/2240	=0.000 =0.634
	=0.161	N↕S CRITICAL	=0.634
ICU=(E↔W)0.372+(N↕S)0.634+0.1-(ATCS)0.10			=1.005

Table:27 Pg:120 Consultant V/C =NONE
$\triangle$f)-b)=0.205 Significant Impact:

Engineer assigned this project is responsible to verify the accuracy of data entered and LOS calculations.

County of Los Angeles Methodology

#9 Note: Extg: Wb > 2 th & 1 str per consultant.
Cum: No feasible mitigation.

Record #: 3688

Traffic Studies Section - Traffic and Lighting Division, Intersection Capacity Analysis, Intersection Capacity Utilization (ICU)

Developed and Prepared by Suen Fei LAU, Associate Civil Engineer

08/25/2010

Project Information Eir#: 07192 TG Page + Grid:	Existing Lane Configuration	Project Mitigation Measures	Cumulative Mitigation Measures
Project Name: FISHERMAN'S VILLAGE MDR PCL 55, 56 & W, Street Name 1: Street Name 2: City: LOS ANGELES CITY Sup Dist: X	Fig:C1B Pg:APXC LnCf√D:√	Fig:C1B Pg:APXC LnCf√D:√	Fig:C1B Pg:APXC LnCf√D:√
Xtn #: 7SAT > 0 % County TG Page + Grid: 672B6 N↕S St: LINCOLN BL RT#-1 E↔W St: MARINA POINTE DR╪MAXELLA AV City: LOS ANGELES CITY In B&T: N> #: Siglzd: Y CMP: CMP Xtn #: Signal: ATCS *Signal Control System* # Phase: 4 CMC: 1375*vph* Reduction: 0.10 Engnr: SUEN FEI LAU Fld √: Y Fld √ Date: 03/06/2008 √ By: "CONSULTANT TRAFFIC STUDY" Cnt By: THE TRAFFIC SOLUTION HPMS Segt: N N ┼ N N Roadway #/o Ln: 0:0 0 0 0 0 0:0			

a) Existing (Counts Date: 06/30/2007 Saturday)
Peak Hour: AM 12:15-01:15P InFo√D:√

Vol√D:√

47 213 1,643 N 177 97 301 63 67 95 2,234 134 206

1,903 2,474 278 575 225 486 2,039 2,574

Fig:11 Pg:52

EbLt= 63/1600 WbTh= 97/640	=0.039 =0.152	NbLt= 134/2880 SbTh= 1690/6400	=0.047 =0.264
E↔W CRITICAL	=0.191		=0.311
WbLt= 301/2240 EbTh= 67/1600	=0.134 =0.042	SbLt= 213/2880 NbTh= 2234/4800	=0.074 =0.465
	=0.176	N↕S CRITICAL	=0.539
ICU=(E↔W)0.191+(N↕S)0.539+0.1-(ATCS)0.10			=0.730

Table:13 Pg:56 Consultant V/C =0.720

b) Existing+Ambient(Growth Rate: 0.6%>Yr: 2014)

49 222 1,713 N 185 101 314 66 70 99 2,330 140 215

Fig:16 Pg:83

EbLt= 66/1600 WbTh= 101/640	=0.041 =0.158	NbLt= 140/2880 SbTh= 1762/6400	=0.049 =0.275
E↔W CRITICAL	=0.199		=0.324
WbLt= 314/2240 EbTh= 70/1600	=0.140 =0.044	SbLt= 222/2880 NbTh= 2330/4800	=0.077 =0.485
	=0.184	N↕S CRITICAL	=0.563
ICU=(E↔W)0.199+(N↕S)0.563+0.1-(ATCS)0.10			=0.762

Table:17 Pg:88 Consultant V/C =0.756

c) Existing+Ambient+Project (Proj » Σ = 81)

Vol√D:√

Proj 0 0 48 N 0 0 0 0 0 0 33 *Proj*

Fig: 8 0 0 Pg:26

49 222 1,761 N 185 101 314 66 70 99 2,363 140 215

Fig:18 Pg:86

EbLt= 66/1600 WbTh= 101/640	=0.041 =0.158	NbLt= 140/2880 SbTh= 1810/6400	=0.049 =0.283
E↔W CRITICAL	=0.199		=0.331
WbLt= 314/2240 EbTh= 70/1600	=0.140 =0.044	SbLt= 222/2880 NbTh= 2363/4800	=0.077 =0.492
	=0.184	N↕S CRITICAL	=0.569
ICU=(E↔W)0.199+(N↕S)0.569+0.1-(ATCS)0.10			=0.768

Table:17 Pg:88 Consultant V/C =0.764

Directional Vol:

2,032 2,718 600 235

$\triangle$c)-b) = 0.007

Significant Impact: NO

d) Existing+Ambient+Project+Mitigation Measures

49 222 1,761 N 185 101 314 66 70 99 2,363 140 215

EbLt= 66/1600 WbTh= 101/640	=0.041 =0.158	NbLt= 140/2880 SbTh= 1810/6400	=0.049 =0.283
E↔W CRITICAL	=0.199		=0.331
WbLt= 314/2240 EbTh= 70/1600	=0.140 =0.044	SbLt= 222/2880 NbTh= 2363/4800	=0.077 =0.492
	=0.184	N↕S CRITICAL	=0.569
ICU=(E↔W)0.199+(N↕S)0.569+0.1-(ATCS)0.10			=0.768

Table:26 Pg:114 Consultant V/C =NONE

$\triangle$d)-b)= 0.007 Significant Impact:

e) Existing+Ambient+Proj+M.M.+Cumulative (Cumul » Σ = 1,523)

Vol√D:√

Cumul 0 11 714 N 0 0 15 0 0 0 783 *Cumul*

Fig:14 0 0 Pg:78

49 233 2,475 N 185 101 329 66 70 99 3,146 140 215

Fig:20 Pg:94

EbLt= 66/1600 WbTh= 101/640	=0.041 =0.158	NbLt= 140/2880 SbTh= 2524/6400	=0.049 =0.394
E↔W CRITICAL	=0.199		=0.443
WbLt= 329/2240 EbTh= 70/1600	=0.147 =0.044	SbLt= 233/2880 NbTh= 3146/4800	=0.081 =0.655
	=0.191	N↕S CRITICAL	=0.736
ICU=(E↔W)0.199+(N↕S)0.736+0.1-(ATCS)0.10			=0.935

Table:19 Pg:97 Consultant V/C =0.963

Directional Vol:

2,757 3,501 615 235

$\triangle$e)-b) = 0.174

Significant Impact: YES

f) Existing+Ambient+Proj+M.M.+Cumulative+M.M.

49 233 2,475 N 185 101 329 66 70 99 3,146 140 215

FgPg√D:√ TbPg√D:√

EbLt= 66/1600 WbTh= 101/640	=0.041 =0.158	NbLt= 140/2880 SbTh= 2524/6400	=0.049 =0.394
E↔W CRITICAL	=0.199		=0.443
WbLt= 329/2240 EbTh= 70/1600	=0.147 =0.044	SbLt= 233/2880 NbTh= 3146/4800	=0.081 =0.655
	=0.191	N↕S CRITICAL	=0.736
ICU=(E↔W)0.199+(N↕S)0.736+0.1-(ATCS)0.10			=0.935

Table:27 Pg:120 Consultant V/C =NO FM

$\triangle$f)-b)=0.174 Significant Impact:

Engineer assigned this project is responsible to verify the accuracy of data entered and LOS calculations.

County of Los Angeles Methodology

#9 Note: Cum mm: No feasible mitigation.

Traffic Studies Section - Traffic and Lighting Division, Intersection Capacity Analysis, Intersection Capacity Utilization (ICU)

Record #: 3689 — Developed and Prepared by Suen Fei LAU, Associate Civil Engineer — 08/25/2010

Project Information Eir#: 07192 TG Page + Grid:	Existing Lane Configuration	Project Mitigation Measures	Cumulative Mitigation Measures
Project Name: FISHERMAN'S VILLAGE MDR PCL 55, 56 & W, Street Name 1: Street Name 2: City: LOS ANGELES CITY Sup Dist: X	Fig:C1B Pg:APXC LnCf√D:√	Fig:C1B Pg:APXC LnCf√D:√	Fig:C1B Pg:APXC LnCf√D:√
Xtn #: 8SAT > 0 % County TG Page + Grid: 672B6 N↕S St: LINCOLN BL RT#-1 E↔W St: MARINA EXWY RT#-90 City: LOS ANGELES CITY In B&T: N> #: HPMS Segt: N Roadway #/o Ln: 0:0 Siglzd: Y CMP: Y CMP Xtn #: 049 Signal: ATCS *Signal Control System* # Phase: 3 CMC: 1425*vph* Reduction: 0.10 N + N Engnr: SUEN FEI LAU Fld √: Y Fld √ Date: / / N 0:0 √ By: "CONSULTANT" Cnt By: THE TRAFFIC SOLUTION			

a) Existing (Counts Date: 06/30/2007 Saturday)
Peak Hour: AM 12:15-01:15P InFo√D:√

Vol√D:√ 0 644 1,439 N 860 0 226 2,083 2,619 0 —1,086 0 805 0 0 0 1,759 Fig:11 0 161 Pg:52 1,665 1,920

EbLt= 0/0 WbTh= 502/3200	=0.000 =0.157	NbLt= 0/0 SbTh= 1439/4800	=0.000 =0.300
E↔W CRITICAL	=0.157		=0.300
WbLt= 226/2880 EbTh= 0/0	=0.078 =0.000	SbLt= 644/2880 NbTh= 1920/4800	=0.224 =0.400
	=0.078	N↕S CRITICAL	=0.624
ICU=(E↔W)0.157+(N↕S)0.624+0.1-(ATCS)0.10			=0.781

Table:13 Pg:56 Consultant V/C =0.685

b) Existing+Ambient(Growth Rate: 0.6%>Yr: 2014)

0 672 1,501 N 897 0 236 0 0 0 1,834 Fig:16 0 168 Pg:83

EbLt= 0/0 WbTh= 524/3200	=0.000 =0.164	NbLt= 0/0 SbTh= 1501/4800	=0.000 =0.313
E↔W CRITICAL	=0.164		=0.313
WbLt= 236/2880 EbTh= 0/0	=0.082 =0.000	SbLt= 672/2880 NbTh= 2002/4800	=0.233 =0.417
	=0.082	N↕S CRITICAL	=0.650
ICU=(E↔W)0.164+(N↕S)0.650+0.1-(ATCS)0.10			=0.814

Table:17 Pg:88 Consultant V/C =0.719

c) Existing+Ambient+Project (Proj » Σ = 81)

Vol√D:√ *0* *0* *Proj* *48* N *0* *0* *0* *0* *0* *0* *33* *Proj* Fig: 8 *0* *0* Pg:26

0 672 1,549 N 897 0 236 0 0 0 1,867 Fig:18 0 168 Pg:86

EbLt= 0/0 WbTh= 524/3200	=0.000 =0.164	NbLt= 0/0 SbTh= 1549/4800	=0.000 =0.323
E↔W CRITICAL	=0.164		=0.323
WbLt= 236/2880 EbTh= 0/0	=0.082 =0.000	SbLt= 672/2880 NbTh= 2035/4800	=0.233 =0.424
	=0.082	N↕S CRITICAL	=0.657
ICU=(E↔W)0.164+(N↕S)0.657+0.1-(ATCS)0.10			=0.821

Table:17 Pg:88 Consultant V/C =0.727

Directional Vol:
2,221 2,035 1,133 0
/\c)-b) = 0.007

Significant Impact: NO

d) Existing+Ambient+Project+Mitigation Measures

0 672 1,549 N 897 0 236 0 0 0 1,867 0 168

EbLt= 0/0 WbTh= 524/3200	=0.000 =0.164	NbLt= 0/0 SbTh= 1549/4800	=0.000 =0.323
E↔W CRITICAL	=0.164		=0.323
WbLt= 236/2880 EbTh= 0/0	=0.082 =0.000	SbLt= 672/2880 NbTh= 2035/4800	=0.233 =0.424
	=0.082	N↕S CRITICAL	=0.657
ICU=(E↔W)0.164+(N↕S)0.657+0.1-(ATCS)0.10			=0.821

Table:26 Pg:114 Consultant V/C =NONE
/\d)-b)= 0.007 Significant Impact:

e) Existing+Ambient+Proj+M.M.+Cumulative (Cumul » Σ = 1,517)

Vol√D:√ *0* *323* *Cumul* *406* N *362* *0* *5* *0* *0* *0* *421* *Cumul* Fig:14 *0* *0* Pg:78

0 995 1,955 N 1,259 0 241 0 0 0 2,288 Fig:20 0 168 Pg:94

EbLt= 0/0 WbTh= 706/3200	=0.000 =0.221	NbLt= 0/0 SbTh= 1955/4800	=0.000 =0.407
E↔W CRITICAL	=0.221		=0.407
WbLt= 241/2880 EbTh= 0/0	=0.084 =0.000	SbLt= 995/2880 NbTh= 2456/4800	=0.345 =0.512
	=0.084	N↕S CRITICAL	=0.857
ICU=(E↔W)0.221+(N↕S)0.857+0.1-(ATCS)0.10			=1.078

Table:19 Pg:97 Consultant V/C =0.952

Directional Vol:
2,950 2,456 1,500 0
/\e)-b) = 0.264

Significant Impact: YES

f) Existing+Ambient+Proj+M.M.+Cumulative+M.M.

0 995 1,955 N 1,259 0 241 0 0 0 2,288 FgPg√D:√ 0 168 TbPg√D:√

EbLt= 0/0 WbTh= 706/3200	=0.000 =0.221	NbLt= 0/0 SbTh= 1955/4800	=0.000 =0.407
E↔W CRITICAL	=0.221		=0.407
WbLt= 241/2880 EbTh= 0/0	=0.084 =0.000	SbLt= 995/2880 NbTh= 2456/4800	=0.345 =0.512
	=0.084	N↕S CRITICAL	=0.857
ICU=(E↔W)0.221+(N↕S)0.857+0.1-(ATCS)0.10			=1.078

Table:27 Pg:120 Consultant V/C =NO FM
/\f)-b)=0.264 Significant Impact:

Engineer assigned this project is responsible to verify the accuracy of data entered and LOS calculations.

County of Los Angeles Methodology

#9 Note: Cum mm: No feasible mitigation.

Record #: 3674

Traffic Studies Section - Traffic and Lighting Division, Intersection Capacity Analysis, Intersection Capacity Utilization (ICU)

Developed and Prepared by Suen Fei LAU, Associate Civil Engineer

08/25/2010

Project Information Eir#: 07192 TG Page + Grid:	Existing Lane Configuration	Project Mitigation Measures	Cumulative Mitigation Measures
Project Name: FISHERMAN'S VILLAGE MDR PCL 55, 56 & W, Street Name 1: Street Name 2: City: LOS ANGELES CITY Sup Dist: X	Fig:C1B Pg:APXC LnCf√D:√	Fig:C1B Pg:APXC LnCf√D:√	Fig:C1B Pg:APXC LnCf√D:√
Xtn #: 7 > 0 % County TG Page + Grid: 672B6 N↕S St: LINCOLN BL RT#-1 E↔W St: MARINA POINTE DR╫MAXELLA AV City: LOS ANGELES CITY In B&T: N> #: Siglzd: Y CMP: CMP Xtn #: Signal: ATCS *Signal Control System* # Phase: 4 CMC: 1375*vph* Reduction: 0.10 Engnr: SUEN FEI LAU Fld √: Y Fld √ Date: 03/06/2008 √ By: "CONSULTANT TRAFFIC STUDY" Cnt By: THE TRAFFIC SOLUTION HPMS Segt: N N N N Roadway #/o Ln: 0:0 0 0 0 0 0:0			

a) Existing (Counts Date: 01/10/2007 Wednesday)
Peak Hour: PM 04:45-05:45P InFo√D:√

Vol√D:√ 20 87 N 2,071 2,260
1,964 126 77 197 ← 287 ← 400
108 83 69 2,026 260 → 491 →
Fig:10B 190 321 **Pg:51** 2,230 2,537

EbLt= 108/1600 WbTh= 77/640	=0.068 =0.120	NbLt= 190/2880 SbTh= 1984/6400	=0.066 =0.310
E↔W CRITICAL	=0.188		=0.376
WbLt= 197/2240 EbTh= 83/1600	=0.088 =0.052	SbLt= 87/2880 NbTh= 2026/4800	=0.030 =0.422
	=0.140	N↕S CRITICAL	=0.452
ICU=(E↔W)0.188+(N↕S)0.452+0.1-(ATCS)0.10			=0.640

Table:13 **Pg:**56 **Consultant V/C** =0.604

b) Existing+Ambient(Growth Rate: 0.6%>Yr: 2014)

21 91 2,048 N 131 80 205
113 87 72 2,113
Fig:15B 198 335 **Pg:82**

EbLt= 113/1600 WbTh= 80/640	=0.071 =0.125	NbLt= 198/2880 SbTh= 2069/6400	=0.069 =0.323
E↔W CRITICAL	=0.196		=0.392
WbLt= 205/2240 EbTh= 87/1600	=0.092 =0.054	SbLt= 91/2880 NbTh= 2113/4800	=0.032 =0.440
	=0.146	N↕S CRITICAL	=0.472
ICU=(E↔W)0.196+(N↕S)0.472+0.1-(ATCS)0.10			=0.667

Table:17 **Pg:**88 **Consultant V/C** =0.634

c) Existing+Ambient+Project (Proj » Σ = 44)

Vol√D:√ 0 0 N *Proj* 24 0 0 0 0 0 0 20 *Proj*
Fig: 7B 0 0 **Pg:**25

21 91 2,072 N 131 80 205
113 87 72 2,133
Fig:17B 198 335 **Pg:85**

EbLt= 113/1600 WbTh= 80/640	=0.071 =0.125	NbLt= 198/2880 SbTh= 2093/6400	=0.069 =0.327
E↔W CRITICAL	=0.196		=0.396
WbLt= 205/2240 EbTh= 87/1600	=0.092 =0.054	SbLt= 91/2880 NbTh= 2133/4800	=0.032 =0.444
	=0.146	N↕S CRITICAL	=0.476
ICU=(E↔W)0.196+(N↕S)0.476+0.1-(ATCS)0.10			=0.672

Table:17 **Pg:**88 **Consultant V/C** =0.639

Directional Vol:
2,184 2,666
← 416
272 →
$\triangle$c)-b)= 0.004

Significant Impact:

d) Existing+Ambient+Project+Mitigation Measures

21 91 2,072 N 131 80 205
113 87 72 2,133
198 335

EbLt= 113/1600 WbTh= 80/640	=0.071 =0.125	NbLt= 198/2880 SbTh= 2093/6400	=0.069 =0.327
E↔W CRITICAL	=0.196		=0.396
WbLt= 205/2240 EbTh= 87/1600	=0.092 =0.054	SbLt= 91/2880 NbTh= 2133/4800	=0.032 =0.444
	=0.146	N↕S CRITICAL	=0.476
ICU=(E↔W)0.196+(N↕S)0.476+0.1-(ATCS)0.10			=0.672

Table:26 **Pg:**114 **Consultant V/C** =NONE
$\triangle$d)-b)= 0.004 Significant Impact:

e) Existing+Ambient+Proj+M.M.+Cumulative (Cumul » Σ = 1,867)

Vol√D:√ 0 0 N *Cumul* 911 0 0 6 0 0 0 950 *Cumul*
Fig:13B 0 0 **Pg:**77

21 91 2,983 N 131 80 211
113 87 72 3,083
Fig:19B 198 335 **Pg:**93

EbLt= 113/1600 WbTh= 80/640	=0.071 =0.125	NbLt= 198/2880 SbTh= 3004/6400	=0.069 =0.469
E↔W CRITICAL	=0.196		=0.538
WbLt= 211/2240 EbTh= 87/1600	=0.094 =0.054	SbLt= 91/2880 NbTh= 3083/4800	=0.032 =0.642
	=0.149	N↕S CRITICAL	=0.674
ICU=(E↔W)0.196+(N↕S)0.674+0.1-(ATCS)0.10			=0.870

Table:19 **Pg:**95 **Consultant V/C** =0.862

Directional Vol:
3,095 3,616
← 422
272 →
$\triangle$e)-b)= 0.202

Significant Impact:

f) Existing+Ambient+Proj+M.M.+Cumulative+M.M.

21 91 2,983 N 131 80 211
113 87 72 3,083
FgPg√D:√ 198 335 **TbPg√D:√**

EbLt= 113/1600 WbTh= 80/640	=0.071 =0.125	NbLt= 198/2880 SbTh= 3004/6400	=0.069 =0.469
E↔W CRITICAL	=0.196		=0.538
WbLt= 211/2240 EbTh= 87/1600	=0.094 =0.054	SbLt= 91/2880 NbTh= 3083/4800	=0.032 =0.642
	=0.149	N↕S CRITICAL	=0.674
ICU=(E↔W)0.196+(N↕S)0.674+0.1-(ATCS)0.10			=0.870

Table:27 **Pg:**120 **Consultant V/C** =NO FM
$\triangle$f)-b)=0.202 Significant Impact:

Engineer assigned this project is responsible to verify the accuracy of data entered and LOS calculations.

County of Los Angeles Methodology

#9 Note: Cum mm: No feasible mitigation.

Record #: 3675

Traffic Studies Section - Traffic and Lighting Division, Intersection Capacity Analysis, Intersection Capacity Utilization (ICU)

Developed and Prepared by Suen Fei LAU, Associate Civil Engineer

08/25/2010

Project Information Eir#: 07192 TG Page + Grid:	Existing Lane Configuration	Project Mitigation Measures	Cumulative Mitigation Measures
Project Name: FISHERMAN'S VILLAGE MDR PCL 55, 56 & W, Street Name 1: Street Name 2: City: LOS ANGELES CITY Sup Dist: X	Fig:C1B Pg:APXC LnCf√D:√	Fig:C1B Pg:APXC LnCf√D:√	Fig:C1B Pg:APXC LnCf√D:√
Xtn #: 8 > 0 % County TG Page + Grid: 672B6 N↕S St: LINCOLN BL RT#-1 E↔W St: MARINA EXWY RT#-90 City: LOS ANGELES CITY #: HPMS Segt: N Roadway #/o Ln: 0:0 In B&T: N> Siglzd: Y CMP: Y CMP Xtn #: 049 Signal: ATCS *Signal Control System* # Phase: 3 CMC: 1425*vph* Reduction: 0.10 N + N Engnr: SUEN FEI LAU N 0:0 Fld √: Y Fld √ Date: / / √ By: "CONSULTANT" Cnt By: THE TRAFFIC SOLUTION			

a) Existing (Counts Date: 01/10/2007 Wednesday)
Peak Hour: PM 04:30-05:30P InFo√D:√

Vol√D:√ 0 699 1,585 N 754 0 154 0 0 0 1,748 0 116 2,284 2,502 0 908 0 815 1,739 1,864

Fig:10B Pg:51

EbLt= 0/0 WbTh= 366/3200	=0.000 =0.114	NbLt= 0/0 SbTh= 1585/4800	=0.000 =0.330
E↔W CRITICAL	=0.114		=0.330
WbLt= 154/2880 EbTh= 0/0	=0.053 =0.000	SbLt= 699/2880 NbTh= 1864/4800	=0.243 =0.388
	=0.053	N↕S CRITICAL	=0.631
ICU=(E↔W)0.114+(N↕S)0.631+0.1-(ATCS)0.10			=0.745

Table:13 Pg:56 Consultant V/C =0.665

b) Existing+Ambient(Growth Rate: 0.6%>Yr: 2014)

0 729 1,653 N 786 0 161 0 0 0 1,823 0 121

Fig:15B Pg:82

EbLt= 0/0 WbTh= 381/3200	=0.000 =0.119	NbLt= 0/0 SbTh= 1653/4800	=0.000 =0.344
E↔W CRITICAL	=0.119		=0.344
WbLt= 161/2880 EbTh= 0/0	=0.056 =0.000	SbLt= 729/2880 NbTh= 1944/4800	=0.253 =0.405
	=0.056	N↕S CRITICAL	=0.658
ICU=(E↔W)0.119+(N↕S)0.658+0.1-(ATCS)0.10			=0.777

Table:17 Pg:88 Consultant V/C =0.699

c) Existing+Ambient+Project (Proj » Σ = 44)

Vol√D:√ *Proj* 0 0 24 N 0 0 0 0 0 0 20 *Proj* 0 0

Fig: 7B Pg:25

0 729 1,677 N 786 0 161 0 0 0 1,843 0 121

Fig:17B Pg:85

Directional Vol:
2,406 1,964 947 0

$\triangle_{c)-b)}$ = 0.004

EbLt= 0/0 WbTh= 381/3200	=0.000 =0.119	NbLt= 0/0 SbTh= 1677/4800	=0.000 =0.349
E↔W CRITICAL	=0.119		=0.349
WbLt= 161/2880 EbTh= 0/0	=0.056 =0.000	SbLt= 729/2880 NbTh= 1964/4800	=0.253 =0.409
	=0.056	N↕S CRITICAL	=0.662
ICU=(E↔W)0.119+(N↕S)0.662+0.1-(ATCS)0.10			=0.781

Table:17 Pg:88 Consultant V/C =0.704

Significant Impact: NO

d) Existing+Ambient+Project+Mitigation Measures

0 729 1,677 N 786 0 161 0 0 0 1,843 0 121

EbLt= 0/0 WbTh= 381/3200	=0.000 =0.119	NbLt= 0/0 SbTh= 1677/4800	=0.000 =0.349
E↔W CRITICAL	=0.119		=0.349
WbLt= 161/2880 EbTh= 0/0	=0.056 =0.000	SbLt= 729/2880 NbTh= 1964/4800	=0.253 =0.409
	=0.056	N↕S CRITICAL	=0.662
ICU=(E↔W)0.119+(N↕S)0.662+0.1-(ATCS)0.10			=0.781

Table:26 Pg:114 Consultant V/C =NONE
$\triangle_{d)-b)}$ = 0.004 Significant Impact:

e) Existing+Ambient+Proj+M.M.+Cumulative (Cumul » Σ = 1,915)

Vol√D:√ *Cumul* 0 341 558 N 442 0 21 0 0 0 553 *Cumul* 0 0

Fig:13B Pg:77

0 1,070 2,235 N 1,228 0 182 0 0 0 2,396 0 121

Fig:19B Pg:93

Directional Vol:
3,305 2,517 1,410 0

$\triangle_{e)-b)}$ = 0.317

EbLt= 0/0 WbTh= 634/3200	=0.000 =0.198	NbLt= 0/0 SbTh= 2235/4800	=0.000 =0.466
E↔W CRITICAL	=0.198		=0.466
WbLt= 182/2880 EbTh= 0/0	=0.063 =0.000	SbLt= 1070/2880 NbTh= 2517/4800	=0.372 =0.524
	=0.063	N↕S CRITICAL	=0.896
ICU=(E↔W)0.198+(N↕S)0.896+0.1-(ATCS)0.10			=1.094

Table:19 Pg:95 Consultant V/C =0.972

Significant Impact: YES

f) Existing+Ambient+Proj+M.M.+Cumulative+M.M.

0 1,070 2,235 N 1,228 0 182 0 0 0 2,396 0 121

FgPg√D:√ TbPg√D:√

EbLt= 0/0 WbTh= 634/3200	=0.000 =0.198	NbLt= 0/0 SbTh= 2235/4800	=0.000 =0.466
E↔W CRITICAL	=0.198		=0.466
WbLt= 182/2880 EbTh= 0/0	=0.063 =0.000	SbLt= 1070/2880 NbTh= 2517/4800	=0.372 =0.524
	=0.063	N↕S CRITICAL	=0.896
ICU=(E↔W)0.198+(N↕S)0.896+0.1-(ATCS)0.10			=1.094

Table:27 Pg:120 Consultant V/C =NO FM
$\triangle_{f)-b)}$=0.317 Significant Impact:

Engineer assigned this project is responsible to verify the accuracy of data entered and LOS calculations.

County of Los Angeles Methodology

#9 Note: Cum mm: No feasible mitigation.

Record #: 3680

Traffic Studies Section - Traffic and Lighting Division, Intersection Capacity Analysis, Intersection Capacity Utilization (ICU)

Developed and Prepared by Suen Fei LAU, Associate Civil Engineer

08/25/2010

Project Information Eir#: 07192 TG Page + Grid:	Existing Lane Configuration	Project Mitigation Measures	Cumulative Mitigation Measures
Project Name: FISHERMAN'S VILLAGE MDR PCL 55, 56 & W, Street Name 1: Street Name 2: City: MARINA DEL REY Sup Dist: 4	Fig:C1C Pg:APXC ØLnCf√D:√ Ø Ø F	Fig:C1C Pg:APXC LnCf√D:√ F	Fig:C1C Pg:APXC LnCf√D:√ F
Xtn #: 13 > 100 % County TG Page + Grid: 672B7 N‡S St: ADMIRALTY WY E↔W St: FIJI WY City: MARINA DEL REY In B&T: N> #: HPMS Segt: N Roadway #/o Ln: 2R2 ▾M Siglzd: Y CMP: N CMP Xtn #: Signal: ATCS *Signal Control System* # Phase: 2 CMC: 1500*vph* Reduction: 0.10 N + N 2 RM + RM 2 2▸ ◂2 Engnr: SUEN FEI LAU Fld √: Y Fld √ Date: 12/04/2001 N :▴ 0:0 √ By: NICKOLAS VANGUNST Cnt By: THE TRAFFIC SOLUTION			

a) Existing (Counts Date: 01/16/2007 Tuesday)
Peak Hour: PM 05:00-06:00P InFo√D:√

Vol√D:√ 119 910 N 1,029 682

0 604 131 0 ← 250 ← 735

78 153 0 0 231 → 1,063 →

Fig:10B 0 0 Pg:51 0 0

EbLt= 78/1600 WbTh= 131/1600	=0.049 =0.082	NbLt= 0/0 SbTh= 41/1600	=0.000 =0.026
E↔W CRITICAL	=0.131		=0.026
WbLt= 0/0 EbTh= 153/3200	=0.000 =0.048	SbLt= 910/2880 NbTh= 0/0	=0.316 =0.000
	=0.048	N‡S CRITICAL	=0.316
ICU=(E↔W)0.131+(N‡S)0.316+0.1-(ATCS)0.10			=0.447

Table:13 Pg:56 Consultant V/C =0.403

b) Existing+Ambient(Growth Rate: 0.6%>Yr: 2014)

124 949 N

0 630 137 0

81 160 0 0

Fig:15B 0 0 Pg:82

EbLt= 81/1600 WbTh= 137/1600	=0.051 =0.086	NbLt= 0/0 SbTh= 43/1600	=0.000 =0.027
E↔W CRITICAL	=0.136		=0.027
WbLt= 0/0 EbTh= 160/3200	=0.000 =0.050	SbLt= 949/2880 NbTh= 0/0	=0.330 =0.000
	=0.050	N‡S CRITICAL	=0.330
ICU=(E↔W)0.136+(N‡S)0.330+0.1-(ATCS)0.10			=0.466

Table:17 Pg:89 Consultant V/C =0.423

c) Existing+Ambient+Project (Proj » Σ = 220)

Vol√D:√ *48* *0* N 172 949 N

Proj *0* *0 73 0* 0 630 210 0

40 59 0 *0* *Proj* 121 219 0 0

Fig: 7B 0 0 Pg:25 Fig:17B 0 0 Pg:85

Directional Vol:

1,121 0

← 840

340 →

$\triangle$c)-b) = 0.071

Significant Impact:

EbLt= 121/1600 WbTh= 210/1600	=0.076 =0.131	NbLt= 0/0 SbTh= 51/1600	=0.000 =0.032
E↔W CRITICAL	=0.207		=0.032
WbLt= 0/0 EbTh= 219/3200	=0.000 =0.068	SbLt= 949/2880 NbTh= 0/0	=0.330 =0.000
	=0.068	N‡S CRITICAL	=0.330
ICU=(E↔W)0.207+(N‡S)0.330+0.1-(ATCS)0.10			=0.536

Table:17 Pg:89 Consultant V/C =0.499

d) Existing+Ambient+Project+Mitigation Measures

172 949 N

0 630 210 0

121 219 0 0

0 0

EbLt= 121/1600 WbTh= 210/1600	=0.076 =0.131	NbLt= 0/0 SbTh= 51/1600	=0.000 =0.032
E↔W CRITICAL	=0.207		=0.032
WbLt= 0/0 EbTh= 219/3200	=0.000 =0.068	SbLt= 949/2880 NbTh= 0/0	=0.330 =0.000
	=0.068	N‡S CRITICAL	=0.330
ICU=(E↔W)0.207+(N‡S)0.330+0.1-(ATCS)0.10			=0.536

Table:26 Pg:114 Consultant V/C =NONE

$\triangle$d)-b)= 0.071 Significant Impact:

e) Existing+Ambient+Proj+M.M.+Cumulative (Cumul » Σ = 639)

Vol√D:√ *35* *250* N 207 1,199 N

Cumul *0* *294 0 0* 0 924 210 0

28 32 0 *0* *Cumul* 149 251 0 0

Fig:13B 0 0 Pg:77 Fig:19B 0 0 Pg:93

Directional Vol:

1,406 0

← 1,134

400 →

$\triangle$e)-b) = 0.175

Significant Impact:

EbLt= 149/1600 WbTh= 210/1600	=0.093 =0.131	NbLt= 0/0 SbTh= 58/1600	=0.000 =0.036
E↔W CRITICAL	=0.224		=0.036
WbLt= 0/0 EbTh= 251/3200	=0.000 =0.078	SbLt= 1199/2880 NbTh= 0/0	=0.416 =0.000
	=0.078	N‡S CRITICAL	=0.416
ICU=(E↔W)0.224+(N‡S)0.416+0.1-(ATCS)0.10			=0.641

Table:19 Pg:96 Consultant V/C =0.609

f) Existing+Ambient+Proj+M.M.+Cumulative+M.M.

207 1,199 N

0 924 210 0

149 251 0 0

FgPg√D:√ 0 0 TbPg√D:N

EbLt= 149/1600 WbTh= 210/1600	=0.093 =0.131	NbLt= 0/0 SbTh= 58/1600	=0.000 =0.036
E↔W CRITICAL	=0.224		=0.036
WbLt= 0/0 EbTh= 251/3200	=0.000 =0.078	SbLt= 1199/2880 NbTh= 0/0	=0.416 =0.000
	=0.078	N‡S CRITICAL	=0.416
ICU=(E↔W)0.224+(N‡S)0.416+0.1-(ATCS)0.10			=0.641

Table:27 Pg:120> Consultant V/C =

$\triangle$f)-b)=0.175 Significant Impact:

County of Los Angeles Methodology

Engineer assigned this project is responsible to verify the accuracy of data entered and LOS calculations.

#9 Note: MDR LUP page 11-15 e.1.b)7): Admiralty southbound at Fiji - Widen west side north from Fiji Way to provide for three through lanes.

Record #: 3681

Traffic Studies Section - Traffic and Lighting Division, Intersection Capacity Analysis, Intersection Capacity Utilization (ICU)

Developed and Prepared by Suen Fei LAU, Associate Civil Engineer

08/25/2010

Project Information Eir#: 07192 TG Page + Grid:	Existing Lane Configuration	Project Mitigation Measures	Cumulative Mitigation Measures
Project Name: FISHERMAN'S VILLAGE MDR PCL 55, 56 & W, Street Name 1: Street Name 2: City: MARINA DEL REY Sup Dist: 4	Fig:C1C Pg:APXC LnCf√D:√	Fig:C1C Pg:APXC LnCf√D:√	Fig:C1C Pg:APXC LnCf√D:√
Xtn #: 14 > 50 % County TG Page + Grid: 672C7 N↕S St: LINCOLN BL RT#-1 E↔W St: FIJI WY City: MARINA DEL REY In B&T: N> #: HPMS Segt: N Roadway #/o Ln: 3R3 ▾M Siglzd: Y CMP: CMP Xtn #: Signal: ATCS *Signal Control System* # Phase: 4 CMC: 1375*vph* Reduction: 0.00 N + N 2 RM 2▸ ◂1 -- 1 Engnr: SUEN FEI LAU Fld √: Y Fld √ Date: 09/10/2003 N :▴ 3:2 √ By: NICKOLAS VANGUNST Cnt By: THE TRAFFIC SOLUTION	F	F	F

a) Existing (Counts Date: 01/16/2007 Tuesday)
Peak Hour: PM 04:45-05:45P **InFo√D:√**

Vol√D:√ 48 35 1,758 N 11 18 31 183 46 797 1,738 1,841 1,932 ← 676 ← 60 1,026 → 100 → 2,586 2,367

Fig:10B 610 19 Pg:51

EbLt= 183/1600 WbTh= 29/1600	=0.114 =0.018	NbLt= 610/2880 SbTh= 1806/4800	=0.212 =0.376
E↔W CRITICAL	=0.133	N↕S CRITICAL	=0.588
WbLt= 31/1600 EbTh= 458/9999	=0.019 =0.046	SbLt= 35/1600 NbTh= 1757/4800	=0.022 =0.366
	=0.065		=0.388
ICU=(E↔W)0.133+(N↕S)0.588+0.1-(ATCS)0.00			=0.821

Table:13 **Pg:**56 **Consultant V/C** =0.759

b) Existing+Ambient(Growth Rate: 0.6%>Yr: 2014)

50 37 1,833 N 12 19 32 191 48 831 1,812

Fig:15B 636 20 Pg:82

EbLt= 191/1600 WbTh= 31/1600	=0.119 =0.019	NbLt= 636/2880 SbTh= 1883/4800	=0.221 =0.392
E↔W CRITICAL	=0.139	N↕S CRITICAL	=0.613
WbLt= 32/1600 EbTh= 478/9999	=0.020 =0.048	SbLt= 37/1600 NbTh= 1832/4800	=0.023 =0.382
	=0.068		=0.405
ICU=(E↔W)0.139+(N↕S)0.613+0.1-(ATCS)0.00			=0.852

Table:17 **Pg:**89 **Consultant V/C** =0.795

c) Existing+Ambient+Project (Proj » Σ = 132)

Vol√D:√ *36* *0* N *Proj* *0* *0* *0* *0* *29* *0* *30* *0* *Proj* 86 37 1,833 N 12 19 32 220 48 861 1,812

Fig: 7B *37* *0* Pg:25 Fig:17B 673 20 Pg:85

Directional Vol: 1,956 2,505 ← 63 1,129 → Δc)-b) = 0.038

EbLt= 220/1600 WbTh= 31/1600	=0.138 =0.019	NbLt= 673/2880 SbTh= 1919/4800	=0.234 =0.400
E↔W CRITICAL	=0.157	N↕S CRITICAL	=0.633
WbLt= 32/1600 EbTh= 487/9999	=0.020 =0.049	SbLt= 37/1600 NbTh= 1832/4800	=0.023 =0.382
	=0.069		=0.405
ICU=(E↔W)0.157+(N↕S)0.633+0.1-(ATCS)0.00			=0.890

Table:17 **Pg:**89 **Consultant V/C** =0.840

Significant Impact: YES

d) Existing+Ambient+Project+Mitigation Measures

86 37 1,833 N 12 19 32 220 48 861 1,812

673 20

EbLt= 220/2240 WbTh= 31/1600	=0.098 =0.019	NbLt= 673/2880 SbTh= 1919/4800	=0.234 =0.400
E↔W CRITICAL	=0.118	N↕S CRITICAL	=0.633
WbLt= 32/1600 EbTh= 48/640	=0.020 =0.075	SbLt= 37/1600 NbTh= 1832/4800	=0.023 =0.382
	=0.095		=0.405
ICU=(E↔W)0.118+(N↕S)0.633+0.1-(ATCS)0.00			=0.851

Table:26 **Pg:**114 **Consultant V/C** =0.777
Δd)-b)= -.001 Significant Impact:

e) Existing+Ambient+Proj+M.M.+Cumulative (Cumul » Σ = 1,811)

Vol√D:√ *25* *12* N *560* *Cumul* *0* *0* *0* *20* *0* *250* *620* *Cumul* 111 49 2,393 N 12 19 32 240 48 1,111 2,432

Fig:13B *324* *0* Pg:77 Fig:19B 997 20 Pg:93

Directional Vol: 2,553 3,449 ← 63 1,399 → Δe)-b) = 0.242

EbLt= 240/2240 WbTh= 31/1600	=0.107 =0.019	NbLt= 997/2880 SbTh= 2504/4800	=0.346 =0.522
E↔W CRITICAL	=0.127	N↕S CRITICAL	=0.868
WbLt= 32/1600 EbTh= 48/640	=0.020 =0.075	SbLt= 49/1600 NbTh= 2452/4800	=0.031 =0.511
	=0.095		=0.541
ICU=(E↔W)0.127+(N↕S)0.868+0.1-(ATCS)0.00			=1.094

Table:19 **Pg:**96 **Consultant V/C** =1.125

Significant Impact: YES

f) Existing+Ambient+Proj+M.M.+Cumulative+M.M.

111 49 2,393 N 12 19 32 240 48 1,111 2,432

FgPg√D:√ 997 20 TbPg√D:√

EbLt= 240/2880 WbTh= 31/1600	=0.083 =0.019	NbLt= 997/2880 SbTh= 2504/4800	=0.346 =0.522
E↔W CRITICAL	=0.103	N↕S CRITICAL	=0.868
WbLt= 32/1600 EbTh= 557/9999	=0.020 =0.056	SbLt= 49/1600 NbTh= 2452/4800	=0.031 =0.511
	=0.076		=0.541
ICU=(E↔W)0.103+(N↕S)0.868+0.1-(ATCS)0.00			=1.071

Table:27 **Pg:**120 **Consultant V/C** =0.964
Δf)-b)=0.219 Significant Impact:

County of Los Angeles Methodology

Engineer assigned this project is responsible to verify the accuracy of data entered and LOS calculations.

#9 Note: MDR LUP page 11-16 e.1.b)8): Fiji Way eastbound at Lincoln - widen the south side of Fiji to accommodate an additional eastbound left-turn lane. Additional analysis since the above-mentioned MM may not be feasible.

Note: Extg: Report > Nb: 2 lt, 1 th & 1 str and Wb: 1 sltrt.
Pm: Report > Nb: 2 lt, 1 th & 1 str and Wb: 1 sltrt.
Cm: Report > Nb: 2 lt, 1 th & 1 str.

Record #: 3682

Traffic Studies Section - Traffic and Lighting Division, Intersection Capacity Analysis, Intersection Capacity Utilization (ICU)

Developed and Prepared by Suen Fei LAU, Associate Civil Engineer

08/25/2010

Project Information Eir#: 07192 TG Page + Grid:	Existing Lane Configuration	Project Mitigation Measures	Cumulative Mitigation Measures
Project Name: FISHERMAN'S VILLAGE MDR PCL 55, 56 & W, Street Name 1: Street Name 2: City: LOS ANGELES CITY Sup Dist: X	Fig:C1C Pg:APXC LnCf√D:√	Fig:C1C Pg:APXC LnCf√D:√	Fig:C1C Pg:APXC LnCf√D:√
Xtn #: 15 > 0 % County TG Page + Grid: 672B7 N↕S St: MARINA EXWY RT#-90 EB E↔W St: MINDANAO WY City: LOS ANGELES CITY HPMS Segt: N Roadway #/o Ln: 0:0 In B&T: N> #: Siglzd: Y CMP: CMP Xtn #: Signal: ATCS *Signal Control System* # Phase: 3 CMC: 1425*vph* Reduction: 0.10 N ┼ N Engnr: SUEN FEI LAU N Fld √: Y Fld √ Date: / / 0:0 √ By: "NOT CHECKED" Cnt By: THE TRAFFIC SOLUTION			F

a) Existing (Counts Date: 01/17/2007 Wednesday)
Peak Hour: PM 04:45-05:45P InFo√D:√

Vol√D:√ 19 36 773 828 0
0 829 580 ← 848 ←1,409
0 467 384 851 → 503 →
Fig:10B 0 0 Pg:51 1,737 0

EbLt= 0/0 WbTh= 829/3200	=0.000 =0.259	NbLt= 0/0 SbTh= 792/3200	=0.000 =0.248
	=0.259	N↕S CRITICAL	=0.248
WbLt= 580/1600 EbTh= 467/2400	=0.363 =0.195	SbLt= 36/1600 NbTh= 0/0	=0.023 =0.000
E↔W CRITICAL	=0.557		=0.023
ICU=(E↔W)0.557+(N↕S)0.248+0.1-(ATCS)0.10			=0.805

Table:13 Pg:56 Consultant V/C =0.601

b) Existing+Ambient(Growth Rate: 0.6%>Yr: 2014)

20 38 806
0 865 605
0 487 400
Fig:15B 0 0 0 Pg:82

EbLt= 0/0 WbTh= 865/3200	=0.000 =0.270	NbLt= 0/0 SbTh= 826/3200	=0.000 =0.258
	=0.270	N↕S CRITICAL	=0.258
WbLt= 605/1600 EbTh= 487/2400	=0.378 =0.203	SbLt= 38/1600 NbTh= 0/0	=0.024 =0.000
E↔W CRITICAL	=0.581		=0.024
ICU=(E↔W)0.581+(N↕S)0.258+0.1-(ATCS)0.10			=0.839

Table:17 Pg:89 Consultant V/C =0.631

c) Existing+Ambient+Project (Proj » Σ = 76)

Vol√D:√ 0 0 0
Proj 0 42 0
0 5 29 0 *Proj*
Fig: 7B 0 0 Pg:25

20 38 806
0 907 605
0 492 429 0
Fig:17B 0 0 Pg:85

EbLt= 0/0 WbTh= 907/3200	=0.000 =0.283	NbLt= 0/0 SbTh= 826/3200	=0.000 =0.258
	=0.283	N↕S CRITICAL	=0.258
WbLt= 605/1600 EbTh= 492/2400	=0.378 =0.205	SbLt= 38/1600 NbTh= 0/0	=0.024 =0.000
E↔W CRITICAL	=0.583		=0.024
ICU=(E↔W)0.583+(N↕S)0.258+0.1-(ATCS)0.10			=0.841

Table:17 Pg:89 Consultant V/C =0.639

Directional Vol:
864 0
921 → ← 1,512
/\c)-b)= 0.002

Significant Impact: NO

d) Existing+Ambient+Project+Mitigation Measures

20 38 806
0 907 605
0 492 429
0 0 0

EbLt= 0/0 WbTh= 907/3200	=0.000 =0.283	NbLt= 0/0 SbTh= 826/3200	=0.000 =0.258
	=0.283	N↕S CRITICAL	=0.258
WbLt= 605/1600 EbTh= 492/2400	=0.378 =0.205	SbLt= 38/1600 NbTh= 0/0	=0.024 =0.000
E↔W CRITICAL	=0.583		=0.024
ICU=(E↔W)0.583+(N↕S)0.258+0.1-(ATCS)0.10			=0.841

Table:26 Pg:114 Consultant V/C =NONE
/\d)-b)= 0.002 Significant Impact:

e) Existing+Ambient+Proj+M.M.+Cumulative (Cumul » Σ = 1,144)

Vol√D:√ 0 15 326
Cumul 0 403 43
0 81 276 0 *Cumul*
Fig:13B 0 0 Pg:77

20 53 1,132
0 ← 1,310 648
0 573 705 0
Fig:19B 0 0 Pg:93

EbLt= 0/0 WbTh= 1310/3200	=0.000 =0.409	NbLt= 0/0 SbTh= 1152/3200	=0.000 =0.360
	=0.409	N↕S CRITICAL	=0.360
WbLt= 648/1600 EbTh= 705/2400	=0.405 =0.294	SbLt= 53/1600 NbTh= 0/0	=0.033 =0.000
E↔W CRITICAL	=0.699		=0.033
ICU=(E↔W)0.699+(N↕S)0.360+0.1-(ATCS)0.10			=1.059

Table:19 Pg:96 Consultant V/C =0.853

Directional Vol:
1,205 0
1,278 → ← 1,958
/\e)-b)= 0.220

Significant Impact: YES

f) Existing+Ambient+Proj+M.M.+Cumulative+M.M.

20 53 1,132
0 ← 1,310 648
0 573 705
FgPg√D:√ 0 0 0 TbPg√D:√

EbLt= 0/0 WbTh= 1310/3200	=0.000 =0.409	NbLt= 0/0 SbTh= 1152/3200	=0.000 =0.360
	=0.409	N↕S CRITICAL	=0.360
WbLt= 648/1600 EbTh= 573/3200	=0.405 =0.179	SbLt= 53/1600 NbTh= 0/0	=0.033 =0.000
E↔W CRITICAL	=0.584		=0.033
ICU=(E↔W)0.584+(N↕S)0.360+0.1-(ATCS)0.10			=0.944

Table:27 Pg:120 Consultant V/C =NO FM
/\f)-b)=0.105 Significant Impact:

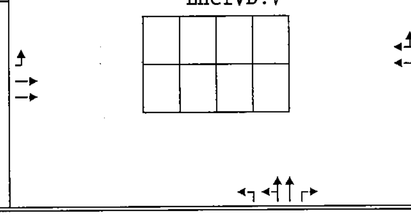
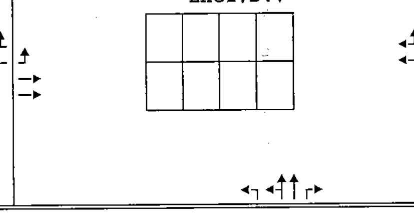
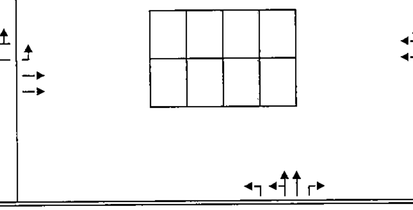
County of Los Angeles Methodology

Engineer assigned this project is responsible to verify the accuracy of data entered and LOS calculations.

#9 Note: EXCg; Repbrper Wbrs2hlGreea.th.
Cm: No feasible mitigation.

Traffic Studies Section - Traffic and Lighting Division, Intersection Capacity Analysis, Intersection Capacity Utilization (ICU)

Record #: 3683 Developed and Prepared by Suen Fei LAU, Associate Civil Engineer 08/25/2010

Project Information Eir#: 07192 TG Page + Grid:	Existing Lane Configuration	Project Mitigation Measures	Cumulative Mitigation Measures
Project Name: FISHERMAN'S VILLAGE MDR PCL 55, 56 & W, Street Name 1: Street Name 2: City: LOS ANGELES CITY Sup Dist: X	Fig:C1D Pg:APXC LnCf√D:√	Fig:C1D Pg:APXC LnCf√D:√	Fig:C1D Pg:APXC LnCf√D:√
Xtn #: 16 > 0 % County TG Page + Grid: 672B6 N↕S St: MARINA EXWY RT#-90 WB E↔W St: MINDANAO WY City: LOS ANGELES CITY HPMS Segt: N Roadway #/o Ln: 0:0 In B&T: N> #: Siglzd: Y CMP: CMP Xtn #: Signal: ATCS *Signal Control System* # Phase: 3 CMC: 1425*vph* Reduction: 0.10 N + N Engnr: SUEN FEI LAU N Fld √: Y Fld √ Date: / / √ By: "NOT CHECKED" Cnt By: THE TRAFFIC SOLUTION 0 -- + -- 0 0 0:0			

a) Existing (Counts Date: 01/17/2007 Wednesday)
Peak Hour: PM 04:45-05:45P InFo√D:√

Vol√D:√ 0 0 0 N 52 826 0 ←1,410 ← 878 10 475 0 888 485 → 903 → 0 950 0 1,900

Fig:10B 584 428 Pg:51

EbLt= 10/1600 WbTh= 878/3200	=0.006 =0.274	NbLt= 584/2240 SbTh= 0/0	=0.261 =0.000
E↔W CRITICAL	=0.281		=0.261
WbLt= 0/0 EbTh= 475/3200	=0.000 =0.148	SbLt= 0/0 NbTh= 888/2240	=0.000 =0.396
	=0.148	N↕S CRITICAL	=0.396
ICU=(E↔W)0.281+(N↕S)0.396+0.1-(ATCS)0.10			=0.677

Table:13 Pg:56 Consultant V/C =0.457

b) Existing+Ambient(Growth Rate: 0.6%>Yr: 2014)

0 0 0 N 54 861 0 10 495 0 926

Fig:15B 609 446 Pg:82

EbLt= 10/1600 WbTh= 915/3200	=0.006 =0.286	NbLt= 609/2240 SbTh= 0/0	=0.272 =0.000
E↔W CRITICAL	=0.292		=0.272
WbLt= 0/0 EbTh= 495/3200	=0.000 =0.155	SbLt= 0/0 NbTh= 926/2240	=0.000 =0.413
	=0.155	N↕S CRITICAL	=0.413
ICU=(E↔W)0.292+(N↕S)0.413+0.1-(ATCS)0.10			=0.706

Table:17 Pg:89 Consultant V/C =0.480

c) Existing+Ambient+Project (Proj » Σ = 47)

Vol√D:√ *0 0 0* N *Proj 0 6 0* *0 5 0* *0* *Proj*

Fig: 7B *36 0* Pg:25

0 0 0 N 54 867 0 10 500 0 926

Fig:17B 645 446 Pg:85

EbLt= 10/1600 WbTh= 921/3200	=0.006 =0.288	NbLt= 645/2240 SbTh= 0/0	=0.288 =0.000
E↔W CRITICAL	=0.294		=0.288
WbLt= 0/0 EbTh= 500/3200	=0.000 =0.156	SbLt= 0/0 NbTh= 926/2240	=0.000 =0.413
	=0.156	N↕S CRITICAL	=0.413
ICU=(E↔W)0.294+(N↕S)0.413+0.1-(ATCS)0.10			=0.707

Table:17 Pg:89 Consultant V/C =0.490

Directional Vol:
0 2,017 ← 921 510 →
$\triangle$c)-b) = 0.002
Significant Impact:

d) Existing+Ambient+Project+Mitigation Measures

0 0 0 N 54 867 0 10 500 0 926

645 446

EbLt= 10/1600 WbTh= 921/3200	=0.006 =0.288	NbLt= 645/2240 SbTh= 0/0	=0.288 =0.000
E↔W CRITICAL	=0.294		=0.288
WbLt= 0/0 EbTh= 500/3200	=0.000 =0.156	SbLt= 0/0 NbTh= 926/2240	=0.000 =0.413
	=0.156	N↕S CRITICAL	=0.413
ICU=(E↔W)0.294+(N↕S)0.413+0.1-(ATCS)0.10			=0.707

Table:26 Pg:114 Consultant V/C =NONE
$\triangle$d)-b)= 0.002 Significant Impact:

e) Existing+Ambient+Proj+M.M.+Cumulative (Cumul » Σ = 1,072)

Vol√D:√ *0 0 0* N *Cumul 20 113 0* *0 96 0* *444* *Cumul*

Fig:13B *334 65* Pg:77

0 0 0 N 74 980 0 10 596 0 1,370

Fig:19B 979 511 Pg:93

EbLt= 10/1600 WbTh= 1054/3200	=0.006 =0.329	NbLt= 979/2240 SbTh= 0/0	=0.437 =0.000
E↔W CRITICAL	=0.336		=0.437
WbLt= 0/0 EbTh= 596/3200	=0.000 =0.186	SbLt= 0/0 NbTh= 1370/2240	=0.000 =0.612
	=0.186	N↕S CRITICAL	=0.612
ICU=(E↔W)0.336+(N↕S)0.612+0.1-(ATCS)0.10			=0.947

Table:19 Pg:95 Consultant V/C =0.703

Directional Vol:
0 2,860 ← 1,054 606 →
$\triangle$e)-b) = 0.242
Significant Impact:

f) Existing+Ambient+Proj+M.M.+Cumulative+M.M.

0 0 0 N 74 980 0 10 596 0 1,370

FgPg√D:√ 979 511 TbPg√D:√

EbLt= 10/1600 WbTh= 1054/3200	=0.006 =0.329	NbLt= 979/2240 SbTh= 0/0	=0.437 =0.000
E↔W CRITICAL	=0.336		=0.437
WbLt= 0/0 EbTh= 596/3200	=0.000 =0.186	SbLt= 0/0 NbTh= 1370/2240	=0.000 =0.612
	=0.186	N↕S CRITICAL	=0.612
ICU=(E↔W)0.336+(N↕S)0.612+0.1-(ATCS)0.10			=0.947

Table:27 Pg:120> Consultant V/C =NONE
$\triangle$f)-b)=0.242 Significant Impact:

Engineer assigned this project is responsible to verify the accuracy of data entered and LOS calculations.

County of Los Angeles Methodology

#9 Note: Extg: Wb > 2 th & 1 str per consultant.
Cum: No feasible mitigation.

Traffic Studies Section - Traffic and Lighting Division, Intersection Capacity Analysis, Intersection Capacity Utilization (ICU)

Record #: 3676 — Developed and Prepared by Suen Fei LAU, Associate Civil Engineer — 08/25/2010

Project Information Eir#: 07192 TG Page + Grid:	Existing Lane Configuration	Project Mitigation Measures	Cumulative Mitigation Measures
Project Name: FISHERMAN'S VILLAGE MDR PCL 55, 56 & W, Street Name 1: Street Name 2: City: MARINA DEL REY Sup Dist: 4	Fig:C1B Pg:APXC ØLnCf√D:√ Ø Ø	Fig:C1B Pg:APXC LnCf√D:√	Fig:C1B Pg:APXC LnCf√D:√
Xtn #: 9 > 100 % County TG Page + Grid: 672B7 N↕S St: ADMIRALTY WY E↔W St: BALI WY City: MARINA DEL REY In B&T: N> #: HPMS Segt: N Roadway #/o Ln: 2R2 Siglzd: Y CMP: N CMP Xtn #: Signal: ATCS *Signal Control System* # Phase: 3 CMC: 1425*vph* Reduction: 0.10 N + N 1 RM 1 + 3 3 Engnr: SUEN FEI LAU N R 2M2 Fld √: Y Fld √ Date: 12/04/2001 √ By: NICKOLAS VANGUNST Cnt By: THE TRAFFIC SOLUTION			

a) Existing (Counts Date: 01/11/2007 Thursday)
Peak Hour: PM 04:45-05:45P InFo√D:√

Vol√D:√
19 176 1,054 N
345 17 45
29 25 28
804
1,249 1,178
58 407
82 358
1,127 983
Fig:10B 22 157 Pg:51

EbLt= 29/1600 WbTh= 169/2400	=0.018 =0.070	NbLt= 22/1600 SbTh= 1073/3200	=0.014 =0.335
E↔W CRITICAL	=0.089		=0.349
WbLt= 45/1600 EbTh= 53/1600	=0.028 =0.033	SbLt= 176/1600 NbTh= 961/3200	=0.110 =0.300
	=0.061	N↕S CRITICAL	=0.410
ICU=(E↔W)0.089+(N↕S)0.410+0.1-(ATCS)0.10			=0.499

Table:13 Pg:56 Consultant V/C =0.558

b) Existing+Ambient(Growth Rate: 0.6%>Yr: 2014)

20 184 1,099 N
360 18 47
30 26 29
838
Fig:15B 23 164 Pg:82

EbLt= 30/1600 WbTh= 176/2400	=0.019 =0.073	NbLt= 23/1600 SbTh= 1119/3200	=0.014 =0.350
E↔W CRITICAL	=0.092		=0.364
WbLt= 47/1600 EbTh= 55/1600	=0.029 =0.034	SbLt= 184/1600 NbTh= 1002/3200	=0.115 =0.313
	=0.064	N↕S CRITICAL	=0.428
ICU=(E↔W)0.092+(N↕S)0.428+0.1-(ATCS)0.10			=0.520

Table:17 Pg:88 Consultant V/C =0.585

c) Existing+Ambient+Project (Proj » Σ = 33)

Vol√D:√ 0 0 N
Proj 18
0 0 0
0 0 0
15 *Proj*
Fig: 7B 0 0 Pg:25
20 184 1,117 N
360 18 47
30 26 29
853
Fig:17B 23 164 Pg:85

EbLt= 30/1600 WbTh= 176/2400	=0.019 =0.073	NbLt= 23/1600 SbTh= 1137/3200	=0.014 =0.355
E↔W CRITICAL	=0.092		=0.370
WbLt= 47/1600 EbTh= 55/1600	=0.029 =0.034	SbLt= 184/1600 NbTh= 1017/3200	=0.115 =0.318
	=0.064	N↕S CRITICAL	=0.433
ICU=(E↔W)0.092+(N↕S)0.433+0.1-(ATCS)0.10			=0.525

Table:17 Pg:88 Consultant V/C =0.590

Directional Vol:
1,321 1,040
425
85
$\triangle$c)-b) = 0.005
Significant Impact:

d) Existing+Ambient+Project+Mitigation Measures

20 184 1,117 N
360 18 47
30 26 29
853
23 164

EbLt= 30/1600 WbTh= 176/2400	=0.019 =0.073	NbLt= 23/1600 SbTh= 1137/3200	=0.014 =0.355
E↔W CRITICAL	=0.092		=0.370
WbLt= 47/1600 EbTh= 55/1600	=0.029 =0.034	SbLt= 184/1600 NbTh= 1017/3200	=0.115 =0.318
	=0.064	N↕S CRITICAL	=0.433
ICU=(E↔W)0.092+(N↕S)0.433+0.1-(ATCS)0.10			=0.525

Table:26 Pg:114 Consultant V/C =NONE
$\triangle$d)-b)= 0.005 Significant Impact:

e) Existing+Ambient+Proj+M.M.+Cumulative (Cumul » Σ = 1,148)

Vol√D:√ 0 2 N
Cumul 503
10 0 0
0 0 0
633 *Cumul*
Fig:13B 0 0 Pg:77
20 186 1,620 N
370 18 47
30 26 29
1,486
Fig:19B 23 164 Pg:93

EbLt= 30/1600 WbTh= 184/2400	=0.019 =0.077	NbLt= 23/1600 SbTh= 1640/3200	=0.014 =0.513
E↔W CRITICAL	=0.095		=0.527
WbLt= 47/1600 EbTh= 55/1600	=0.029 =0.034	SbLt= 186/1600 NbTh= 1650/3200	=0.116 =0.516
	=0.064	N↕S CRITICAL	=0.632
ICU=(E↔W)0.095+(N↕S)0.632+0.1-(ATCS)0.10			=0.727

Table:19 Pg:95 Consultant V/C =0.809

Directional Vol:
1,826 1,673
435
85
$\triangle$e)-b) = 0.207
Significant Impact:

f) Existing+Ambient+Proj+M.M.+Cumulative+M.M.

20 186 1,620 N
370 18 47
30 26 29
1,486
FgPg√D:√ 23 164 TbPg√D:√

EbLt= 30/1600 WbTh= 184/2400	=0.019 =0.077	NbLt= 23/1600 SbTh= 1640/3200	=0.014 =0.513
E↔W CRITICAL	=0.095		=0.527
WbLt= 47/1600 EbTh= 55/1600	=0.029 =0.034	SbLt= 186/1600 NbTh= 1486/3200	=0.116 =0.464
	=0.064	N↕S CRITICAL	=0.581
ICU=(E↔W)0.095+(N↕S)0.581+0.1-(ATCS)0.10			=0.676

Table:27 Pg:120 Consultant V/C =0.724
$\triangle$f)-b)=0.156 Significant Impact:
County of Los Angeles Methodology

Engineer assigned this project is responsible to verify the accuracy of data entered and LOS calculations.

#9 Note: EDB CUB pageg1C-25ie.Wrang Admiwaltynwayewidensngtant stated xtn is already ATCS.
Cum mm: + ATCS.

Traffic Studies Section - Traffic and Lighting Division, Intersection Capacity Analysis, Intersection Capacity Utilization (ICU)

Record #: 3677 — Developed and Prepared by Suen Fei LAU, Associate Civil Engineer — 08/25/2010

Project Information Eir#: 07192 TG Page + Grid:	Existing Lane Configuration	Project Mitigation Measures	Cumulative Mitigation Measures
Project Name: FISHERMAN'S VILLAGE MDR PCL 55, 56 & W, Street Name 1: Street Name 2: City: MARINA DEL REY Sup Dist: 4	Fig:C1B Pg:APXC LnCf√D:√	Fig:C1B Pg:APXC LnCf√D:√	Fig:C1B Pg:APXC LnCf√D:√
Xtn #: 10 > 100 % County TG Page + Grid: 672B7 N↕S St: LINCOLN BL RT#-1 E↔W St: BALI WY City: MARINA DEL REY In B&T: N> #: HPMS Segt: N Roadway #/o Ln: 3R3 ▼M Siglzd: Y CMP: CMP Xtn #: Signal: ATCS *Signal Control System* 3 ◄1 # Phase: 4 CMC: 1375*vph* Reduction: 0.10 N + N RM + -- Engnr: SUEN FEI LAU 3► 1 Fld √: Y Fld √ Date: 09/10/2003 N R▲ √ By: NICKOLAS VANGUNST 3M3 Cnt By: THE TRAFFIC SOLUTION	F	F	F

a) Existing (Counts Date: 01/11/2007 Thursday)

Peak Hour: PM 04:30-05:30P InFo√D:√

Vol√D:√ 258 18 — 1,495 — N — 41 4 17 — 296 5 73 — 1,533 — 114 22

1,771 1,870 — ← 376 — 374 → — ← 62 — 45 → — 1,585 1,669

Fig:10B Pg:51

EbLt= 296/2240 WbTh= 41/1600	=0.132 =0.026	NbLt= 114/1600 SbTh= 1753/4800	=0.071 =0.365
E↔W CRITICAL	=0.158	N↕S CRITICAL	=0.436
WbLt= 17/1600 EbTh= 5/640	=0.011 =0.008	SbLt= 18/1600 NbTh= 1555/4800	=0.011 =0.324
	=0.018		=0.335
ICU=(E↔W)0.158+(N↕S)0.436+0.1-(ATCS)0.10			=0.594

Table:13 Pg:56 Consultant V/C =0.562

b) Existing+Ambient(Growth Rate: 0.6%>Yr: 2014)

269 19 — 1,559 — N — 43 4 18 — 309 5 76 — 1,599 — 119 23

Fig:15B Pg:82

EbLt= 309/2240 WbTh= 43/1600	=0.138 =0.027	NbLt= 119/1600 SbTh= 1828/4800	=0.074 =0.381
E↔W CRITICAL	=0.165	N↕S CRITICAL	=0.455
WbLt= 18/1600 EbTh= 5/640	=0.011 =0.008	SbLt= 19/1600 NbTh= 1622/4800	=0.012 =0.338
	=0.019		=0.350
ICU=(E↔W)0.165+(N↕S)0.455+0.1-(ATCS)0.10			=0.620

Table:17 Pg:88 Consultant V/C =0.591

c) Existing+Ambient+Project (Proj » Σ = 44)

Vol√D:√ 0 0 — 24 — N — 0 0 0 — *Proj* — 0 0 0 — 20 — *Proj* — 0 0

Fig: 7B Pg:25

269 19 — 1,583 — N — 43 4 18 — 309 5 76 — 1,619 — 119 23

Fig:17B Pg:85

EbLt= 309/2240 WbTh= 43/1600	=0.138 =0.027	NbLt= 119/1600 SbTh= 1852/4800	=0.074 =0.386
E↔W CRITICAL	=0.165	N↕S CRITICAL	=0.460
WbLt= 18/1600 EbTh= 5/640	=0.011 =0.008	SbLt= 19/1600 NbTh= 1642/4800	=0.012 =0.342
	=0.019		=0.354
ICU=(E↔W)0.165+(N↕S)0.460+0.1-(ATCS)0.10			=0.625

Table:17 Pg:88 Consultant V/C =0.597

Directional Vol: 1,871 — 1,761 — ← 65 — 390 → — /\c)-b)= 0.005

Significant Impact:

d) Existing+Ambient+Project+Mitigation Measures

269 19 — 1,583 — N — 43 4 18 — 309 5 76 — 1,619 — 119 23

EbLt= 309/2240 WbTh= 43/1600	=0.138 =0.027	NbLt= 119/1600 SbTh= 1852/4800	=0.074 =0.386
E↔W CRITICAL	=0.165	N↕S CRITICAL	=0.460
WbLt= 18/1600 EbTh= 5/640	=0.011 =0.008	SbLt= 19/1600 NbTh= 1642/4800	=0.012 =0.342
	=0.019		=0.354
ICU=(E↔W)0.165+(N↕S)0.460+0.1-(ATCS)0.10			=0.625

Table:26 Pg:114 Consultant V/C =NONE

/\d)-b)= 0.005 Significant Impact:

e) Existing+Ambient+Proj+M.M.+Cumulative (Cumul » Σ = 1,115)

Vol√D:√ 7 0 — 540 — N — 0 0 0 — *Cumul* — 0 0 2 — 563 — *Cumul* — 3 0

Fig:13B Pg:77

276 19 — 2,123 — N — 43 4 18 — 309 5 78 — 2,182 — 122 23

Fig:19B Pg:93

EbLt= 309/2240 WbTh= 43/1600	=0.138 =0.027	NbLt= 122/1600 SbTh= 2399/4800	=0.076 =0.500
E↔W CRITICAL	=0.165	N↕S CRITICAL	=0.576
WbLt= 18/1600 EbTh= 5/640	=0.011 =0.008	SbLt= 19/1600 NbTh= 2205/4800	=0.012 =0.459
	=0.019		=0.471
ICU=(E↔W)0.165+(N↕S)0.576+0.1-(ATCS)0.10			=0.741

Table:19 Pg:95 Consultant V/C =0.732

Directional Vol: 2,418 — 2,327 — ← 65 — 392 → — /\e)-b)= 0.121

Significant Impact:

f) Existing+Ambient+Proj+M.M.+Cumulative+M.M.

276 19 — 2,123 — N — 43 4 18 — 309 5 78 — 2,182 — 122 23

FgPg√D:√ TbPg√D:√

EbLt= 309/2240 WbTh= 43/1600	=0.138 =0.027	NbLt= 122/1600 SbTh= 2123/4800	=0.076 =0.442
E↔W CRITICAL	=0.165	N↕S CRITICAL	=0.519
WbLt= 18/1600 EbTh= 5/640	=0.011 =0.008	SbLt= 19/1600 NbTh= 2205/4800	=0.012 =0.459
	=0.019		=0.471
ICU=(E↔W)0.165+(N↕S)0.519+0.1-(ATCS)0.10			=0.683

Table:27 Pg:120 Consultant V/C =0.665

/\f)-b)=0.063 Significant Impact:

County of Los Angeles Methodology

Engineer assigned this project is responsible to verify the accuracy of data entered and LOS calculations.

#9 Note: MDR LUP page 11-15 e.1.b)4): Lincoln southbound at Bali - widen west side north of Bali Way to provide a right-turn approach lane with a 90-foot transition at Bali.

Note: Another consultant stated the xtn is 3 phase ATCS not 4.

Traffic Studies Section - Traffic and Lighting Division, Intersection Capacity Analysis, Intersection Capacity Utilization (ICU)

Record #: 3678 — Developed and Prepared by Suen Fei LAU, Associate Civil Engineer — 08/25/2010

Project Information Eir#: 07192 TG Page + Grid:	Existing Lane Configuration	Project Mitigation Measures	Cumulative Mitigation Measures
Project Name: FISHERMAN'S VILLAGE MDR PCL 55, 56 & W, Street Name 1: Street Name 2: City: MARINA DEL REY Sup Dist: 4	Fig:C1C Pg:APXC ⌀LnCf√D:√	Fig:C1C Pg:APXC LnCf√D:√	Fig:C1C Pg:APXC LnCf√D:√
Xtn #: 11 > 100 % County TG Page + Grid: 672B7 N↕S St: ADMIRALTY WY E↔W St: MINDANAO WY City: MARINA DEL REY # : HPMS Segt: N Roadway #/o Ln: 2R2 In B&T: N> Siglzd: Y CMP: N CMP Xtn #: Signal: ATCS Signal Control System # Phase: 3 CMC: 1425vph Reduction: 0.10 N + N 2 RM 2 + RM 2 Engnr: SUEN FEI LAU Fld √: Y Fld √ Date: 12/04/2001 N R 2M2 √ By: NICKOLAS VANGUNST Cnt By: THE TRAFFIC SOLUTION	⌀ ⌀ ⌀		

a) Existing (Counts Date: 01/11/2007 Thursday)
Peak Hour: PM 04:15-05:15P InFo√D:√

Vol√D:√ 15 300 845 N 410 20 316; 26 39 24; 564; Fig:10B 15 188 Pg:51; 1,160 1,000; ← 50 ← 746; 89 → 527 →; 1,185 767

EbLt= 26/1600 WbTh= 110/1600	=0.016 =0.069	NbLt= 15/1600 SbTh= 860/3200	=0.009 =0.269
	=0.085		=0.278
WbLt= 316/2240 EbTh= 63/1600	=0.141 =0.039	SbLt= 300/1600 NbTh= 752/3200	=0.188 =0.235
E↔W CRITICAL	=0.180	N↕S CRITICAL	=0.423
ICU=(E↔W)0.180+(N↕S)0.423+0.1-(ATCS)0.10			=0.603

Table:13 Pg:56 Consultant V/C =0.590

b) Existing+Ambient(Growth Rate: 0.6%>Yr: 2014)

16 313 881 N 428 21 330; 27 41 25; 588; Fig:15B 16 196 Pg:82

EbLt= 27/1600 WbTh= 115/1600	=0.017 =0.072	NbLt= 16/1600 SbTh= 897/3200	=0.010 =0.280
	=0.089		=0.290
WbLt= 330/2240 EbTh= 66/1600	=0.147 =0.041	SbLt= 313/1600 NbTh= 784/3200	=0.196 =0.245
E↔W CRITICAL	=0.189	N↕S CRITICAL	=0.441
ICU=(E↔W)0.189+(N↕S)0.441+0.1-(ATCS)0.10			=0.629

Table:17 Pg:89 Consultant V/C =0.619

c) Existing+Ambient+Project (Proj » Σ = 88)

Vol√D:√ 0 0 18 N 0 0 30; Proj 0 0 0; 15; Proj; Fig: 7B 0 25 Pg:25

16 313 899 N 428 21 360; 27 41 25; 603; Fig:17B 16 221 Pg:85

Directional Vol: 1,228 840 ← 809 93 → Δc)-b) = 0.026

Significant Impact:

EbLt= 27/1600 WbTh= 115/1600	=0.017 =0.072	NbLt= 16/1600 SbTh= 915/3200	=0.010 =0.286
	=0.089		=0.296
WbLt= 360/2240 EbTh= 66/1600	=0.161 =0.041	SbLt= 313/1600 NbTh= 824/3200	=0.196 =0.258
E↔W CRITICAL	=0.202	N↕S CRITICAL	=0.453
ICU=(E↔W)0.202+(N↕S)0.453+0.1-(ATCS)0.10			=0.655

Table:17 Pg:89 Consultant V/C =0.643

d) Existing+Ambient+Project+Mitigation Measures

16 313 899 N 428 21 360; 27 41 25; 603; 16 221

EbLt= 27/1600 WbTh= 115/1600	=0.017 =0.072	NbLt= 16/1600 SbTh= 915/3200	=0.010 =0.286
	=0.089		=0.296
WbLt= 360/2240 EbTh= 66/1600	=0.161 =0.041	SbLt= 313/1600 NbTh= 824/3200	=0.196 =0.258
E↔W CRITICAL	=0.202	N↕S CRITICAL	=0.453
ICU=(E↔W)0.202+(N↕S)0.453+0.1-(ATCS)0.10			=0.655

Table:26 Pg:114 Consultant V/C =0.613
Δd)-b)= 0.026 Significant Impact:

e) Existing+Ambient+Proj+M.M.+Cumulative (Cumul » Σ = 1,180)

Vol√D:√ 0 245 251 N 304 3 36; Cumul 0 0 0; 310; Cumul; Fig:13B 0 31 Pg:77

16 558 1,150 N 732 24 396; 27 41 25; 913; Fig:19B 16 252 Pg:93

Directional Vol: 1,724 1,181 ← 1,152 93 → Δe)-b) = 0.302

Significant Impact:

EbLt= 27/1600 WbTh= 174/1600	=0.017 =0.109	NbLt= 16/1600 SbTh= 1166/3200	=0.010 =0.364
	=0.126		=0.374
WbLt= 396/2240 EbTh= 66/1600	=0.177 =0.041	SbLt= 558/1600 NbTh= 1165/3200	=0.349 =0.364
E↔W CRITICAL	=0.218	N↕S CRITICAL	=0.713
ICU=(E↔W)0.218+(N↕S)0.713+0.1-(ATCS)0.10			=0.931

Table:19 Pg:96 Consultant V/C =0.960

f) Existing+Ambient+Proj+M.M.+Cumulative+M.M.

16 558 1,150 N 732 24 396; 27 41 25; 913; FgPg√D:√ 16 252 TbPg√D:√

EbLt= 27/1600 WbTh= 422/2026	=0.017 =0.208	NbLt= 16/1600 SbTh= 1166/3200	=0.010 =0.364
	=0.225		=0.374
WbLt= 396/2026 EbTh= 66/1600	=0.195 =0.041	SbLt= 558/2880 NbTh= 1165/3200	=0.194 =0.364
E↔W CRITICAL	=0.237	N↕S CRITICAL	=0.558
ICU=(E↔W)0.237+(N↕S)0.558+0.1-(ATCS)0.10			=0.795

Table:27 Pg:120 Consultant V/C =0.812
Δf)-b)=0.165 Significant Impact:

Engineer assigned this project is responsible to verify the accuracy of data entered and LOS calculations. **County of Los Angeles Methodology**

#9 Note: MDR LUP page 11-16 e.1.b)6): Admiralty northbound at Mindanao - widen east side south from Mindanao Way to provide a right-turn approach lane with a 90-foot transition at Mindanao. This is no longer feasible.
Need additional southbound left-turn lane not part of Category 1 Improvements - System-wide; convert westbound to shared lt/th/rt lane.

Note: Extg: this consultant 4 phase ATSAC. Proj mm: ATCS. Cum mm proposed by consultant for nb is not feasible.

Traffic Studies Section - Traffic and Lighting Division, Intersection Capacity Analysis, Intersection Capacity Utilization (ICU)

Record #: 3679 Developed and Prepared by Suen Fei LAU, Associate Civil Engineer 08/25/2010

Project Information Eir#: 07192 TG Page + Grid:	Existing Lane Configuration	Project Mitigation Measures	Cumulative Mitigation Measures
Project Name: FISHERMAN'S VILLAGE MDR PCL 55, 56 & W, Street Name 1: Street Name 2: City: MARINA DEL REY Sup Dist: 4	Fig:C1C Pg:APXC LnCf√D:√	Fig:C1C Pg:APXC LnCf√D:√	Fig:C1C Pg:APXC LnCf√D:√
Xtn #: 12 > 50 % County TG Page + Grid: 672B7 N↕S St: LINCOLN BL RT#-1 E↔W St: MINDANAO WY City: MARINA DEL REY In B&T: N> #: HPMS Segt: N Siglzd: Y CMP: CMP Xtn #: Signal: ATCS *Signal Control System* # Phase: 4 CMC: 1375*vph* Reduction: 0.10 Engnr: SUEN FEI LAU Fld √: Y Fld √ Date: 03/11/2009 √ By: ISAAC WONG Cnt By: THE TRAFFIC SOLUTION Roadway #/o Ln: 3R3 M, 2 RM 2, 2, 2, R 3M3			

a) Existing (Counts Date: 01/11/2007 Thursday)
Peak Hour: PM 04:45-05:45P InFo√D:√

Vol√D:√
SB: 67 171; 1,306; NB: 1,579; 127 289
EB: 0 / 412 / 157; WB: 56 / 508 / 312
E-W: ← 702, ← 876; 569 →, 872 →
N-S: 1,544 1,635; 1,775 1,995

Fig:10B Pg:51

EbLt= 0/0 WbTh= 564/3200	=0.000 =0.176	NbLt= 127/1600 SbTh= 1373/4800	=0.079 =0.286
	=0.176		=0.365
WbLt= 312/2880 EbTh= 569/3200	=0.108 =0.178	SbLt= 171/1600 NbTh= 1868/4800	=0.107 =0.389
E↔W CRITICAL	=0.286	N↕S CRITICAL	=0.496
ICU=(E↔W)0.286+(N↕S)0.496+0.1-(ATCS)0.10			=0.782

Table:13 Pg:56 Consultant V/C =0.739

b) Existing+Ambient(Growth Rate: 0.6%>Yr: 2014)

SB: 70 178; 1,362; NB: 1,647; 132 301
EB: 0 / 430 / 164; WB: 58 / 530 / 325

Fig:15B Pg:82

EbLt= 0/0 WbTh= 588/3200	=0.000 =0.184	NbLt= 132/1600 SbTh= 1432/4800	=0.083 =0.298
	=0.184		=0.381
WbLt= 325/2880 EbTh= 594/3200	=0.113 =0.186	SbLt= 178/1600 NbTh= 1948/4800	=0.111 =0.406
E↔W CRITICAL	=0.298	N↕S CRITICAL	=0.517
ICU=(E↔W)0.298+(N↕S)0.517+0.1-(ATCS)0.10			=0.816

Table:17 Pg:89 Consultant V/C =0.775

c) Existing+Ambient+Project (Proj » Σ = 120)

Vol√D:√
Proj: SB: 0 0; 24; NB: 20; 0 9
EB: 0 / 25 / 0; WB: 0 / 30 / 12 *Proj*

Fig: 7B Pg:25

SB: 70 178; 1,386; NB: 1,667; 132 310
EB: 0 / 455 / 164; WB: 58 / 560 / 337

Fig:17B Pg:85

Directional Vol:
1,634 ↓ 2,109 ↑
← 955
619 →
$\triangle$c)-b) = 0.018

EbLt= 0/0 WbTh= 618/3200	=0.000 =0.193	NbLt= 132/1600 SbTh= 1456/4800	=0.083 =0.303
	=0.193		=0.386
WbLt= 337/2880 EbTh= 619/3200	=0.117 =0.193	SbLt= 178/1600 NbTh= 1977/4800	=0.111 =0.412
E↔W CRITICAL	=0.310	N↕S CRITICAL	=0.523
ICU=(E↔W)0.310+(N↕S)0.523+0.1-(ATCS)0.10			=0.834

Table:17 Pg:89 Consultant V/C =0.794

Significant Impact: NO

d) Existing+Ambient+Project+Mitigation Measures

SB: 70 178; 1,386; NB: 1,667; 132 310
EB: 0 / 455 / 164; WB: 58 / 560 / 337

EbLt= 0/0 WbTh= 618/3200	=0.000 =0.193	NbLt= 132/1600 SbTh= 1456/4800	=0.083 =0.303
	=0.193		=0.386
WbLt= 337/2880 EbTh= 619/3200	=0.117 =0.193	SbLt= 178/1600 NbTh= 1977/4800	=0.111 =0.412
E↔W CRITICAL	=0.310	N↕S CRITICAL	=0.523
ICU=(E↔W)0.310+(N↕S)0.523+0.1-(ATCS)0.10			=0.834

Table:26 Pg:114 Consultant V/C =NONE
$\triangle$d)-b)= 0.018 Significant Impact:

e) Existing+Ambient+Proj+M.M.+Cumulative (Cumul » Σ = 1,872)

Vol√D:√
Cumul: SB: 3 8; 539; NB: 562; 3 74
EB: 0 / 274 / 2; WB: 0 / 370 / 37 *Cumul*

Fig:13B Pg:77

SB: 73 186; 1,925; NB: 2,229; 135 384
EB: 0 / 729 / 166; WB: 58 / 930 / 374

Fig:19B Pg:93

Directional Vol:
2,184 ↓ 2,748 ↑
← 1,362
895 →
$\triangle$e)-b) = 0.255

EbLt= 0/0 WbTh= 988/3200	=0.000 =0.309	NbLt= 135/1600 SbTh= 1998/4800	=0.084 =0.416
	=0.309		=0.501
WbLt= 374/2880 EbTh= 895/3200	=0.130 =0.280	SbLt= 186/1600 NbTh= 2613/4800	=0.116 =0.544
E↔W CRITICAL	=0.410	N↕S CRITICAL	=0.661
ICU=(E↔W)0.410+(N↕S)0.661+0.1-(ATCS)0.10			=1.070

Table:19 Pg:96 Consultant V/C =1.051

Significant Impact: YES

f) Existing+Ambient+Proj+M.M.+Cumulative+M.M.

SB: 73 186; 1,925; NB: 2,229; 135 384
EB: 0 / 729 / 166; WB: 58 / 930 / 374

FgPg√D:√ TbPg√D:√

EbLt= 0/0 WbTh= 988/3200	=0.000 =0.309	NbLt= 135/1600 SbTh= 1998/4800	=0.084 =0.416
	=0.309		=0.501
WbLt= 374/2880 EbTh= 895/3200	=0.130 =0.280	SbLt= 186/1600 NbTh= 2613/4800	=0.116 =0.544
E↔W CRITICAL	=0.410	N↕S CRITICAL	=0.661
ICU=(E↔W)0.410+(N↕S)0.661+0.1-(ATCS)0.10			=1.070

Table:27 Pg:120 Consultant V/C =NO FM
$\triangle$f)-b)=0.255 Significant Impact:

Engineer assigned this project is responsible to verify the accuracy of data entered and LOS calculations. **County of Los Angeles Methodology**

#9 Note: MDR LUP page 11-15 e.1.b)5): Lincoln northbound at Mindanao - widen west side both north and south of Mindanao Way, relocate and narrow the median island, to provide for right-turn lane at or through lane at Mindanao (already in place as of 06/08).

Note: Extg: NB right-turn overlap phase for future condition (1 lt, 3 th & 1 rt)and should not be use as existing.
Cm: No feasible mitigation.

APPENDIX E

WEEKDAY VERSUS WEEKEND ANALYSIS

EXCERPT FROM MARINA DEL REY TRAFFC STUDY, 1982, GRUEN ASSOCIATES

(FROM LACDPW/LACDBH)

MARINA DEL REY TRAFFIC STUDY

1982

PREPARED FOR
COUNTY OF LOS ANGELES
DEPARTMENT OF SMALL CRAFT HARBORS

GRUEN ASSOCIATES

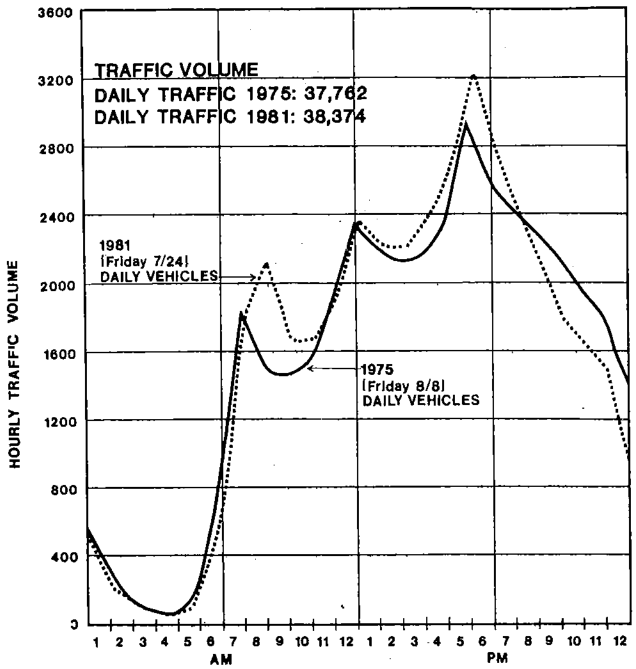
EXISTING TRAFFIC CONDITIONS

Depicted in Figure 3 is the variation in weekday (Friday) traffic from 1975 to 1981. Traffic utilizing Admiralty Way north of Bali Way has not changed in pattern. It has, however, experienced a growth of 15 percent in the morning peak hour and about 10 percent in the evening peak hour. Daily Friday traffic, however, has increased only by 1.6 percent over six years. Saturday traffic has increased by 3.9 percent as shown in Figure 4. A major change from the 1976 Saturday traffic is that peak hours occur at 11:30 a.m. and 6:00 p.m. These peaks are rather sharp and spread out. In 1975, the highest traffic volume started at 2:00 p.m. and continued through 8:00 p.m. Hourly traffic volumes fluctuated within approximately 100 vehicles per hour over the highest six hours of peak traffic. The Sunday traffic pattern (Figure 5) has experienced a change in the time of occurrence of the evening peak hour from 4:00 p.m. in 1975 to 6:00 p.m. in 1981. Daily Sunday traffic has increased by 6 percent over the last six years. This increase amounts to a one percent increase annually, the highest in any day of the week.

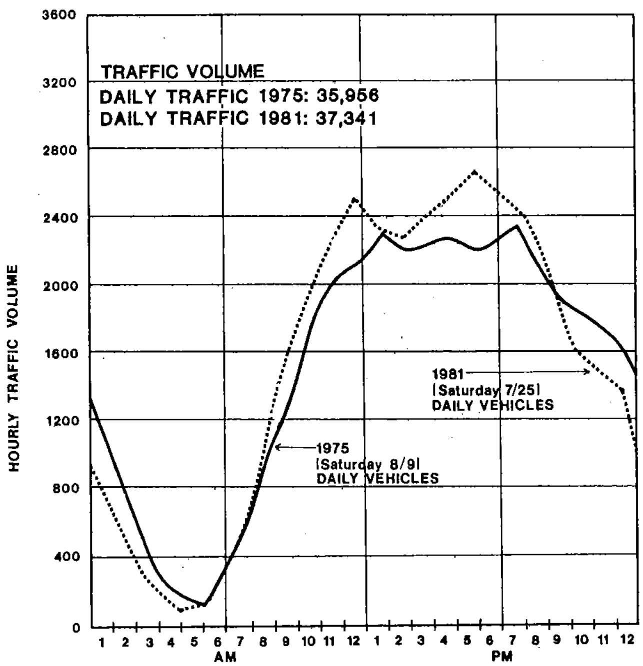
Traffic Volumes: Figure 6 illustrates 1981 weekday traffic volumes, while Figure 7 illustrates 1981 weekend (Saturday and Sunday) traffic volumes in Marina del Rey and vicinity.

The heaviest traffic volumes in the Marina are experienced by Lincoln Boulevard at 51,000 vehicles per day, Washington Boulevard at 41,000 vehicles per day and Admiralty Way at 37,000 vehicles per day. Streets intersecting Admiralty Way are currently carrying between 7,000 and 21,000 vehicles per day. Mole streets are generally experiencing traffic volumes of less than 7,000 vehicles per day, except for Fiji Way which is travelled by 11,500 vehicles per day.

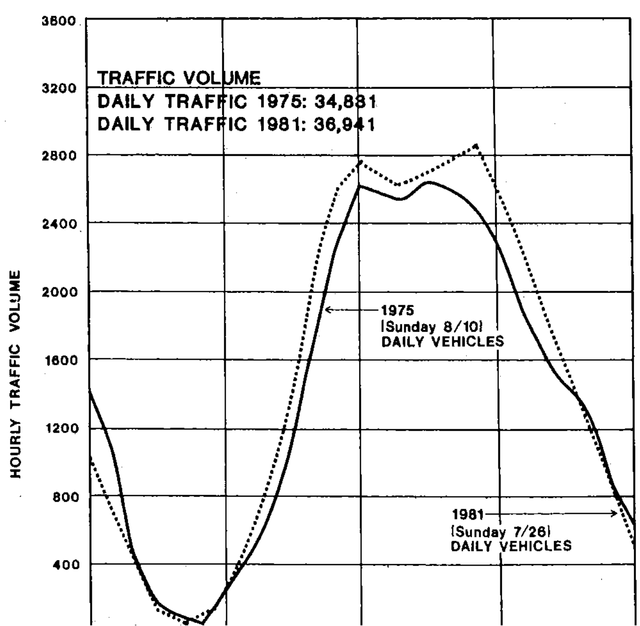
Among weekdays, Friday traffic volumes are the highest, and peak hour volumes generally range between 7.5 percent to 9.5 percent of daily traffic.



3 FRIDAY



4 SATURDAY

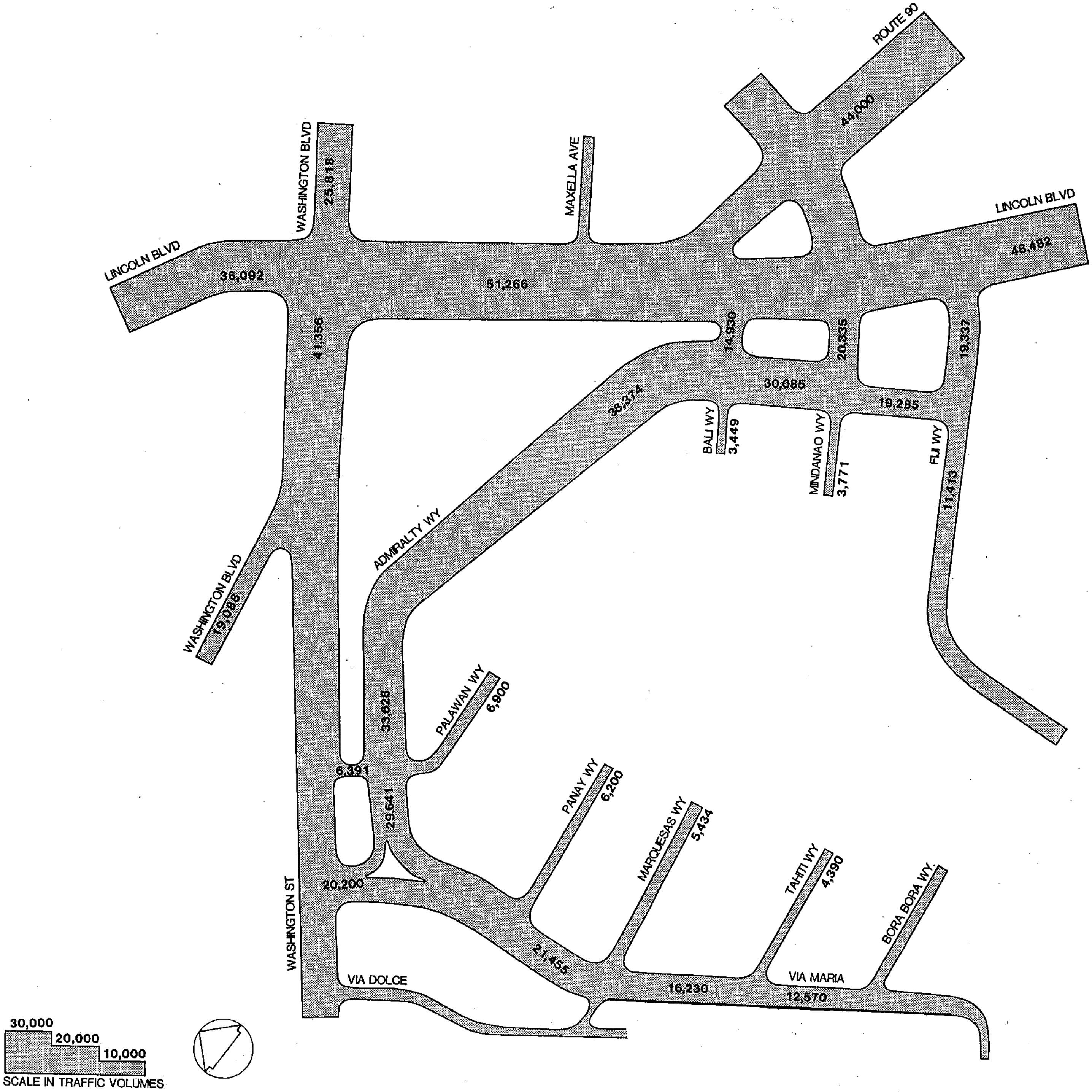


5 SUNDAY

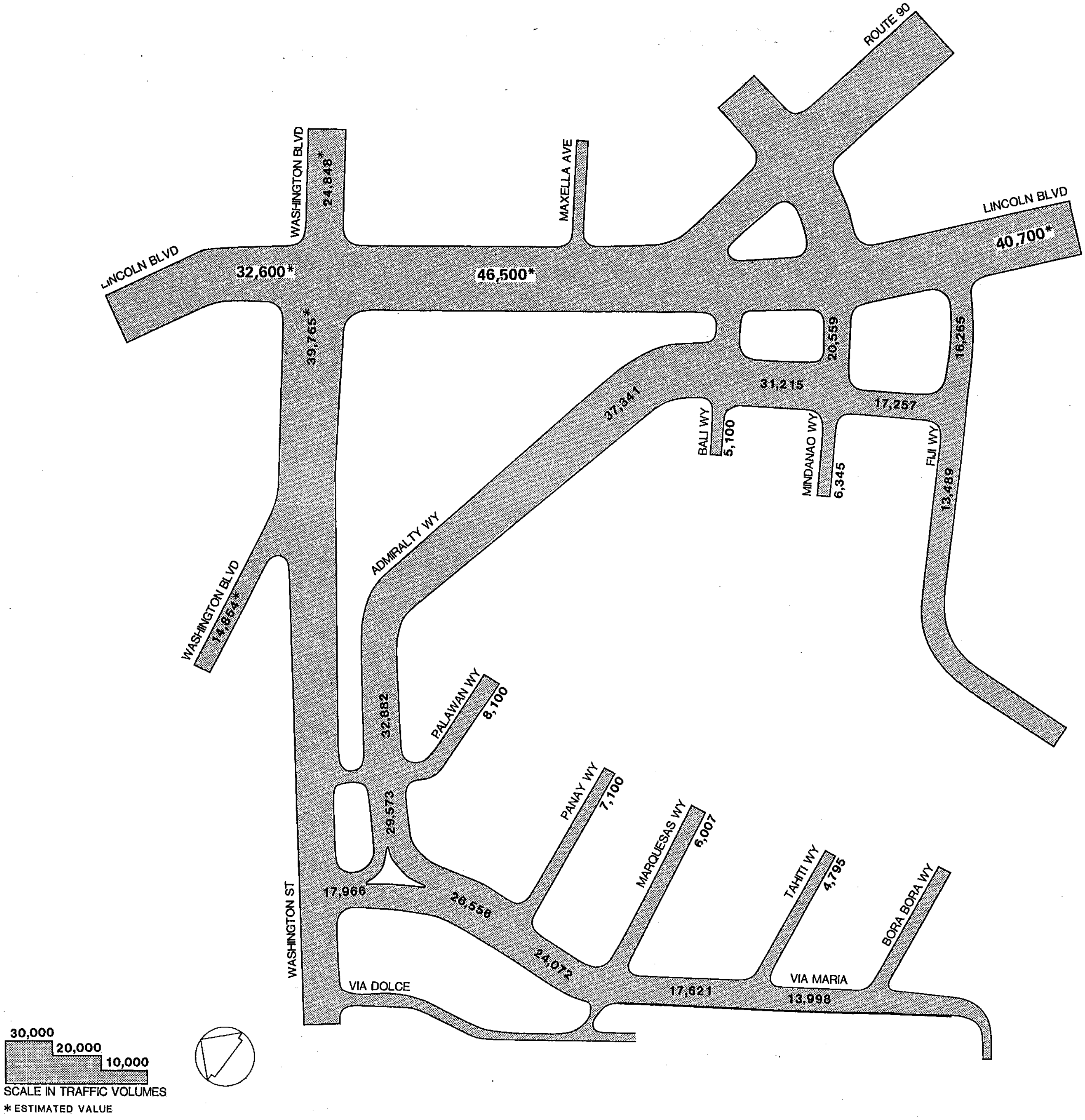
TRAFFIC VOLUMES 1975 and 1981

ADMIRALTY WAY NORTH OF BALI WAY

MARINA DEL REY TRAFFIC STUDY



6
1981 WEEKDAY TRAFFIC VOLUMES
MARINA DEL REY TRAFFIC STUDY

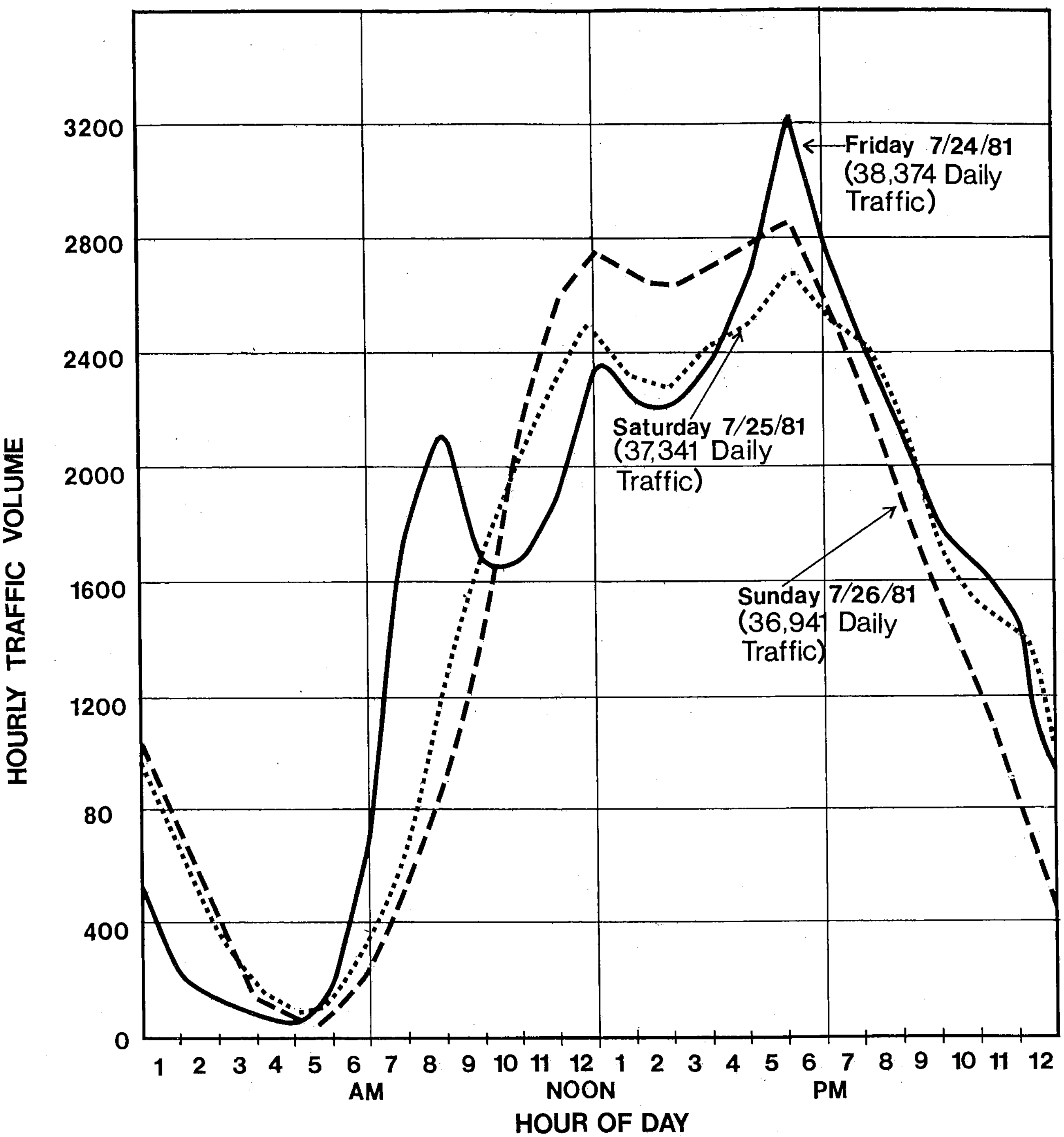


7
1981 WEEKEND TRAFFIC VOLUMES
MARINA DEL REY TRAFFIC STUDY

Weekday versus Weekend Traffic: Figure 8 illustrates typical hourly patterns for Friday, Saturday and Sunday in July of 1981 along Admiralty Way between Bali Way and Palawan Way. Two pronounced peaks on Friday occur in the morning and afternoon rush hours. Another substantial peak is observed at midday lunch time. The Friday afternoon peak hour is much greater than the Friday morning peak hour, indicating that a large component of the traffic is attributed to visitors as well as residents returning home from work. Heavy Friday traffic extends through the evening hours as a result of visitor and resident activities.

Saturday traffic patterns are distinctly different from those of Friday traffic. Summer Saturday traffic reaches a peak at noon and stays relatively high into the evening. While Saturday peak hour traffic does not reach the same level as Friday afternoon peak hour traffic, the total daily traffic on Saturday comprises more than 97 percent of Friday traffic. Sunday traffic constitutes 96 percent of that of Friday (Figure 8). The different traffic patterns observed for Saturday and Sunday reflect a mixture of daytime and evening recreational activities including boating, tourism and restaurant activities. These figures indicate that weekday peak hour traffic generally represents the controlling (heavier) condition for planning and design of the Marina area transportation system. In addition, weekday traffic extends throughout the year, while heavy weekend traffic is limited to the summer months, thus providing justification for the use of weekday traffic demand as a basis for planning transportation improvements. Weekend traffic, however, requires special consideration due to the different mix of traffic including bicyclists, sight-seers and tourist drivers unfamiliar with the Marina del Rey area.

As shown in Figures 6 and 7, weekday traffic differs from weekend traffic primarily in two areas, along Lincoln Boulevard where higher weekday traffic reflects employment concentration and commuter travel, and along Admiralty Way near the beach where higher weekend traffic reflects recreational activities.



8

TYPICAL WEEKDAY AND WEEKEND HOURLY TRAFFIC PATTERNS

ADMIRALTY WAY NORTH OF BALI WAY

MARINA DEL REY TRAFFIC STUDY

APPENDIX F

TRIP GENERATION STUDIES AND ANALYSES

EXCERPT FROM MARINA DEL REY TRAFFIC STUDY, FINAL REPORT, DKS ASSOCIATES IN ASSOCIATION WITH GRUEN ASSOCIATES, JANUARY 1991

AND

EXCERPT FROM THE MARINA DEL REY TRAFFIC STUDY ADDENDUM, FINAL REPORT, DKS ASSOCIATES, MAY 1994

(FROM LACDPW/LACDBH)

MARINA DEL REY TRAFFIC STUDY

Final Report

Prepared for

Los Angeles County
Department of Regional Planning

DKS Associates
In Association with Gruen Associates

January 17, 1991

- The circuitous orientation and "hook" shape of Admiralty Way, with no access points to westbound Washington Boulevard east of Via Marina, is the main factor discouraging use of the Marina streets as a bypass route for longer distance trips. Any future improvements to the Marina intersections are not anticipated to alter this significantly, unless these improvements change the orientation and access points to Admiralty Way creating a more attractive through corridor.

2.4 Trip Generation Analysis

The most common practice in forecasting traffic which may be generated by proposed developments is the use of nationally accepted trip generation rates from sources such as the Institute of Transportation Engineers (ITE) *Trip Generation Manual.* However, if a particular land use, due to its location or other unique characteristics, exhibits obvious differences in trip generation from similar land uses, it is always the recommended practice to use customized trip generation rates which have been specifically developed for that land use through trip generation surveys. To estimate future traffic from various proposed land uses for Marina del Rey, it is desirable to use trip generation rates which most accurately reflect the unique characteristics of the developments within the Marina.

2.4.1 The Advantages of Customized Trip Generation Rates

The ITE *Trip Generation Manual* (4th Edition 1987) is based on 1,950 individual trip generation studies. However, it is recognized that many of these studies are limited in sample number and the results often need to be used with caution. Trip generation characteristics for a land use often vary from place to place so it is recommended in the book that users "...may wish to modify or adjust the rates presented...to reflect a site's location, public transportation service, ride sharing, proximity to other developments...and special characteristics of the site or the surrounding area. Local data should be collected for comparison when considering use of the data in this report." (ibid. p.iii).

Other sources also recommend care when using regionally developed trip generation rates. The National Co-operative Highway Research Program *Report 187* is a user's guide for quick response urban travel estimation (Transportation Research Board 1978). The guide contains nationally derived trip generation data. However users are warned that "...the values given are averages and...they vary by location in an urbanized area, by size of urbanized area, and by location within the United States." (ibid. p.19). The report also recommends that "If manual techniques are to be applied for some level of study (i.e., corridor, site) in an urbanized area where regional planning efforts have resulted in pertinent data...the local results should be considered for the special study." (ibid. p.19).

The Marina del Rey Traffic Study was able to undertake local trip generation studies, as recommended in the *Trip Generation Manual* and the NCHRP *Report 187.* Where these rates differed significantly from the ITE rates, the local Marina del Rey rates were used. The NCHRP 187 rates are considered too old for use in this study.

Another source of Trip Generation rates is the San Diego Association of Governments *Traffic Generators* book (SANDAG 1981). These rates are specific to San Diego which is a very different type of community to Marina del Rey and the surrounding area. In addition the rates are older than ITE rates and are generally only of use for studies in San Diego or if no rates are available for a particular land use in ITE or from local studies. For these reasons this source was not used in this traffic study, and is quoted here for information only.

2.4.2 Traffic Counts

To investigate the possible unique trip generation characteristics of land uses in the Marina area, driveway traffic counts were conducted on Thursday June 21, 1990 at 14 selected typical developments within the Marina, as identified by the County. These included a bank, a medical facility, two hotels, two restaurants, two apartment complexes, two commercial shopping centers, and four marine recreation and boating facilities. For each development, inbound and outbound traffic was counted between the hours of 7:00 to 9:00 AM and 4:00 to 6:30 PM, recorded by 15 minute increments. Site and driveway location sketches for these land uses and summarized traffic count data are presented in the Technical Supplement.

2.4.3 Trip Generation Rate Calculation

Existing land use build-out intensities for these 14 developments was obtained from the Department of Regional Planning and from other available resources. The AM and PM peak hour, inbound and outbound vehicle trip generation rates were calculated using the survey counts and land use quantities. Tables 2-6 and 2-7 summarize the results of the derived rates for the AM and PM peak hours respectively. These tables indicate the name and type of the specific development, the land use quantities, counted peak hour inbound, outbound and total trips and the calculated generation rates for each development.

2.4.4 Comparison with ITE Rates

To see how these derived trip generation rates for Marina del Rey land uses differed from nationally used averages, they were compared with trip generation rates for similar land uses published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 4th Edition. Results are shown in Tables 2-8 and 2-9 for AM and PM peak hours respectively. Some distinct patterns emerge when comparing Marina del Rey and ITE rates. The following is a general discussion of the differences in rates for each peak hour.

Table 2–6
Marina del Rey Traffic Study
Marina del Rey Trip Generation AM Peak

	Units	Inbound Rate	Inbound Trips	Outbound Rate	Outbound Trips	Total Rate	Total Trips
California Overseas Bank	5.65 KSF	3.186	18	0.885	5	4.071	23
Benihana's Restaurant	3.96 KSF	0.253	1	0.253	1	0.506	2
	127 Seats	0.008	1	0.008	1	0.016	2
Cheesecake Factory Restaurant	4.10 KSF	8.537	35	5.854	24	14.391	59
	518 Seats	0.068	35	0.046	24	0.114	59
Doubletree Hotel	300 Rooms	0.177	53	0.153	46	0.330	99
Marina Int'l Hotel	134 Rooms	0.321	43	0.254	34	0.575	77
Marina Beach Shopping Center	20.9 KSF	8.900	186	8.182	171	17.082	357
Marina Shopping Center	124.9 KSF	2.578	322	2.346	293	4.924	615
Mariner's Village Apartments	981 DU	0.063	62	0.310	304	0.373	366
Villa Venetia Apartments	224 DU	0.089	20	0.214	48	0.303	68
Medical Building	52.98 KSF	0.698	37	0.245	13	0.943	50
Tradewinds Marina	157 Slips	0.076	12	0.529	83	0.605	95
Santa Monica Yacht Center	201 Slips	0.030	6	0.030	6	0.060	12
Windjammers Marina	422 Slips	0.014	6	0.019	8	0.033	14
Windward Yacht Center	58 Slips	0.241	14	0.155	9	0.396	23

KSF = 1,000 square feet
DU = Dwelling Unit

Table 2-7
Marina del Rey Traffic Study
Marina del Rey Trip Generation PM Peak

		Inbound		Outbound		Total	
	Units	Rate	Trips	Rate	Trips	Rate	Trips
California Overseas Bank	5.65 KSF	3.540	20	4.070	23	7.610	43
Benihana's Restaurant	3.96 KSF	3.283	13	0.758	3	4.041	16
	127 Seats	0.102	13	0.024	3	0.126	16
Cheesecake Factory Restaurant	4.10 KSF	44.634	183	16.341	67	60.975	250
	518 Seats	0.353	183	0.129	67	0.482	250
Doubletree Hotel	300 Rooms	0.110	33	0.187	56	0.297	89
Marina Int'l Hotel	134 Rooms	0.269	36	0.209	28	0.478	64
Marina Beach Shopping Center	20.9 KSF	11.579	242	11.053	231	22.632	473
Marina Shopping Center	124.9 KSF	4.540	567	4.371	546	8.911	1113
Mariner's Village Apartments	981 DU	0.236	232	0.127	125	0.363	357
Villa Venetia Apartments	224 DU	0.196	44	0.103	23	0.299	67
Medical Building	52.98 KSF	0.491	26	1.208	64	1.699	90
Tradewinds Marina	157 Slips	0.064	10	0.318	50	0.382	60
Santa Monica Yacht Center	201 Slips	0.104	21	0.070	14	0.174	35
Windjammers Marina	422 Slips	0.021	9	0.019	8	0.040	17
Windward Yacht Center	58 Slips	0.138	8	0.190	11	0.328	19

KSF = 1,000 square feet
DU = Dwelling Unit

Table 2-8
Marina del Rey Traffic Study
Comparison of Marina Versus ITE (4th Ed.) Trip Rates AM Peak

		Rate In		Rate Out		Rate Total	
	Units	Marina	ITE	Marina	ITE	Marina	ITE
California Overseas Bank	5.65 KSF	3.186	4.969	0.885	3.177	4.071	8.146
Benihana's Restaurant	3.96 KSF	0.253	0.818	0.253	0.091	0.506	0.909
	127 Seats	0.008	0.015	0.008	0.015	0.016	0.030
Cheesecake Factory Restaurant	4.10 KSF	8.537	10.702	5.854	8.408	14.391	19.110
	518 Seats	0.068	N/A(1)	0.046	N/A(1)	0.114	N/A(1)
Doubletree Hotel	300 Rooms	0.177	0.465	0.153	0.239	0.330	0.704
Marina Int'l Hotel	134 Rooms	0.321	0.465	0.254	0.239	0.575	0.704
Marina Beach Shopping Center	20.9 KSF	8.900	2.709	8.182	1.161	17.082	3.870
Marina Shopping Center	124.9 KSF	2.578	1.539	2.346	0.659	4.924	2.198
Mariner's Village Apartments	981 DU	0.063	0.096	0.310	0.436	0.373	0.532
Villa Venetia Apartments	224 DU	0.089	0.096	0.214	0.436	0.303	0.532
Medical Building	52.98 KSF	0.698	0.328	0.245	0.098	0.943	0.426
Tradewinds Marina	157 Slips	0.076	0.011	0.529	0.079	0.605	0.090
Santa Monica Yacht Center	201 Slips	0.030	0.045	0.030	0.045	0.060	0.090
Windjammers Marina	422 Slips	0.014	0.040	0.019	0.050	0.033	0.090
Windward Yacht Center	58 Slips	0.241	0.055	0.155	0.035	0.396	0.090

(1)Trip generation rate not available for this unit type.
Shading indicates Marina del Rey rates higher than ITE rates.
KSF = 1,000 square feet
DU = Dwelling Unit

Table 2-9
Marina del Rey Traffic Study
Comparison of Marina Versus ITE (4th Ed.) Trip Rates PM Peak

		Rate In		Rate Out		Rate Total	
	Units	Marina	ITE	Marina	ITE	Marina	ITE
California Overseas Bank	5.65 KSF	3.540	9.088	4.070	11.107	7.610	20.195
Benihana's Restaurant	3.96 KSF	3.283	5.003	0.758	2.248	4.041	7.251
	127 Seats	0.102	0.178	0.024	0.042	0.126	0.220
Cheesecake Factory Restaurant	4.10 KSF	44.634	10.562	16.341	9.367	60.975	19.929
	518 Seats	0.353	N/A(1)	0.129	N/A(1)	0.482	N/A(1)
Doubletree Hotel	300 Rooms	0.110	0.359	0.187	0.305	0.297	0.664
Marina Int'l Hotel	134 Rooms	0.269	0.359	0.209	0.305	0.478	0.664
Marina Beach Shopping Center	20.9 KSF	11.579	7.981	11.053	8.307	22.632	16.288
Marina Shopping Center	124.9 KSF	4.540	4.017	4.371	4.181	8.911	8.198
Mariner's Village Apartments	981 DU	0.236	0.458	0.127	0.215	0.363	0.673
Villa Venetia Apartments	224 DU	0.196	0.458	0.103	0.215	0.299	0.673
Medical Building	52.98 KSF	0.491	0.400	1.208	0.743	1.699	1.143
Tradewinds Marina	157 Slips	0.064	0.028	0.318	0.142	0.382	0.170
Santa Monica Yacht Center	201 Slips	0.104	0.102	0.070	0.068	0.174	0.170
Windjammers Marina	422 Slips	0.021	0.092	0.019	0.078	0.040	0.170
Windward Yacht Center	58 Slips	0.138	0.072	0.190	0.098	0.328	0.170

(1)Trip generation rate not available for this unit type.
Shading indicates Marina del Rey rates higher than ITE rates.
KSF = 1,000 square feet
DU = Dwelling Unit

- AM peak hour:

Overall, Marina rates are mostly lower than ITE rates--for 9 of the inbound, 7 of the outbound and 9 of the total rates out of the 14 sites. Marina del Rey rates are generally lower than ITE for restaurants, the bank, the hotels, and apartments but are higher than ITE rates for the medical center and commercial centers. The results are however, mixed for the marinas and yacht clubs--higher in two cases and lower for the other two.

The most significant difference appears to be in the shopping center trip generation. Shopping center rates are 2 to 4 times higher for the Marina sites compared to ITE.

- PM peak hour:

Overall, rates obtained for the Marina del Rey sites for the PM peak hour are closer to ITE rates than for the AM peak hour. Seven out of fourteen sites are higher and seven lower. Marina del Rey rates are lower than the ITE rates at one restaurant, the bank, the hotels, and apartments but are higher for the other restaurant, for the medical center and commercial centers. This is generally a very similar pattern to the AM case. Although mixed again, rates are generally higher for boating uses in Marina del Rey compared to ITE. The most significant difference is for the Cheesecake Factory Restaurant, where the inbound trip rates are over 4 times higher than the ITE rates. This particular restaurant is currently a very popular site and has one of the highest sales volumes, which could explain the high rates. This could be considered to be a non-typical case. It is worth noting that the Santa Monica Yacht Club rates are in both AM and PM cases almost identical to the ITE rates.

- Generalized Overall Summary:

In summary the above comparisons suggest the following generalized patterns.

Marina del Rey Rates Lower than ITE Rates	Marina del Rey Rates Higher than ITE Rates	Mixed Results
hotels	medical center	boating facilities
bank	shopping center	restaurants
apartment		

2.4.5 Investigation and Analysis

To explore possible reasons for higher trip generation rates than ITE, Los Angeles County Department of Beaches and Harbors provided information regarding specific activities at the survey sites. A copy of the memo is included in the Technical Supplement. For the most part, no apparent reasons could be found.

Further investigation into the reasons for the significant differences was conducted in cooperation with the County Regional Planning, Public Works and Beaches and Harbors staff in a working session. To help the discussions, Table 2-10 was developed, which combines all information in Tables 2-8 and 2-9 and also provides trip generation rates from the 3rd edition of the ITE Manual for further comparison.

An additional source of Marina del Rey trip generation surveys was made available by the County. This was a trip generation study undertaken by Barton Aschman Associates in December 1989. A copy of the summary table from the report dated March 19, 1990, is included in Technical Supplement to this report.

Some of the generators which the Barton Aschman study considered are the same as those surveyed in this report. Some of the rates are not consistent with those produced for this report, primarily because the December period is a very different trip generation period to June for seasonally affected land uses. The Barton Aschman study indicates lower rates for the hotel; however, the Marina Shopping Center showed higher trip rates in December but the Marina Beach Shopping Center was significantly lower in December than June. The Villa Venetia and Mariners Village apartment complexes had very close trip rates for both survey periods.

The working group discussion focused on determining the most appropriate approach for the development of customized Marina Trip Rates. The issues included whether or not to use the ITE Trip Generation Manual (4th Edition, 1987) rates, whether to only use the rates developed from the June survey, and finally, whether to combine survey results and develop average rates based on all or some of the June rates with the Barton Aschman rates developed in December 1989.

2.4.6 Conclusions and Recommendations

It was concluded that each type of development should be considered on its own rather than a blanket decision being applied to all generator types. Six types of land uses were considered for development of trip rates which are unique to Marina del Rey:

1. Restaurant
2. Hotel
3. Shopping Center
4. Office
5. Apartments
6. Marina/Yacht Clubs

Table 2-10
Marina del Rey Traffic Study
Comparison of Marina Versus ITE (4th Ed.) Trip Rates AM and PM Peak

		AM PEAK						PM PEAK						PM PEAK
		Rate In		Rate Out		Rate Total		Rate In		Rate Out		Rate Total		Rate Total
	Units	Marina	ITE	Marina	ITE	Marina	ITE	Marina	ITE	Marina	ITE	Marina	ITE	ITE(2)
Calif. Overseas Bank	5.65 KSF	3.186	4.969	0.885	3.177	4.071	8.146	3.540	9.088	4.070	11.107	7.610	20.195	6.300
Benihana's Rest.	3.96 KSF	0.253	0.818	0.253	0.091	0.506	0.909	3.283	5.003	0.758	2.248	4.041	7.251	6.140
	127 Seats	0.008	0.015	0.008	0.015	0.016	0.030	0.102	0.178	0.024	0.042	0.126	0.220	0.140
Cheesecake Factory	4.10 KSF	8.537	10.702	5.854	8.408	14.391	19.110	44.634	10.562	16.341	9.367	60.975	19.929	10.500
	518 Seats	0.068	N/A(1)	0.046	N/A(1)	0.114	N/A(1)	0.353	N/A(1)	0.129	N/A(1)	0.482	N/A(1)	N/A(1)
Doubletree Hotel	300 Rooms	0.177	0.465	0.153	0.239	0.330	0.704	0.110	0.359	0.187	0.305	0.297	0.664	0.730
Marina Int'l Hotel	134 Rooms	0.321	0.465	0.254	0.239	0.575	0.704	0.269	0.359	0.209	0.305	0.478	0.664	0.730
Marina Bch Center	20.9 KSF	8.900	2.709	8.182	1.161	17.082	3.870	11.579	7.981	11.053	8.307	22.632	16.288	14.420
Marina Shopping Ctr	124.9 KSF	2.578	1.539	2.346	0.659	4.924	2.198	4.540	4.017	4.371	4.181	8.911	8.198	5.900
Mariner's Vill. Apts.	981 DU	0.063	0.096	0.310	0.436	0.373	0.532	0.236	0.458	0.127	0.215	0.363	0.673	0.700
Villa Venetia Apts.	224 DU	0.089	0.096	0.214	0.436	0.303	0.532	0.196	0.458	0.103	0.215	0.299	0.673	0.700
Medical Building	52.98 KSF	0.698	0.328	0.245	0.098	0.943	0.426	0.491	0.400	1.208	0.743	1.699	1.143	N/A(1)
Tradewinds Marina	157 Slips	0.076	0.011	0.529	0.079	0.605	0.090	0.064	0.028	0.318	0.142	0.382	0.170	0.170
Santa Monica Yacht	201 Slips	0.030	0.045	0.030	0.045	0.060	0.090	0.104	0.102	0.070	0.068	0.174	0.170	0.170
Windjammers Marina	422 Slips	0.014	0.040	0.019	0.050	0.033	0.090	0.021	0.092	0.019	0.078	0.040	0.170	0.170
Windward Yacht Ctr.	58 Slips	0.241	0.055	0.155	0.035	0.396	0.090	0.138	0.072	0.190	0.098	0.328	0.170	0.170

(1)Trip generation rate not available for this unit type.
(2)Trip generation rate from 3rd Ed. ITE Trip Generation Manual.
Shading indicates rates higher than ITE (4th Ed.) rates.
KSF = 1,000 square feet
DU = Dwelling Unit

Banks were excluded because this land use is not specifically mentioned in future land use planning for the Marina. In addition, only one bank was surveyed which does not give sufficient justification to deviate from the ITE trip generation rates.

A summary of the recommended Marina del Rey trip generation rates is displayed in Table 2-11. The following paragraphs describe the process and reasons behind the development of the recommended rates for each of these six land uses:

Restaurants:

It was decided to augment the June data with the December data to achieve a sample of five restaurants from which to derive a weighted average trip rate based on number of seats. This was done because generally the number of restaurant seats, rather than square footage, has a closer correlation with trip generation. In addition, it was felt that the restaurants in the Marina area are popular the entire year and the combined surveys would provide a better average rate for future planning use. The resulting recommended Marina rate is higher than the ITE rate.

Hotels:

It was decided to use only the June data for hotel trip generation. Hotels are very seasonal in terms of their guest numbers and the critical period is summer not winter. In support of this, it was discovered that the hotels had a much higher (over 80 percent occupancy) occupancy rate at the time of the survey in June than in December. A weighted average trip rate was developed using the two hotels surveyed in June. Even with the high occupancy rates, both showed lower rates than ITE which suggested that this was a typical trend for hotels in this area. For this reason it was not felt appropriate to use the higher ITE rates.

Shopping Centers:

It was decided to use only the June survey trip rates for shopping centers due to the abnormal shopping patterns that occur in December - before Christmas. Both shopping centers surveyed showed higher trip rates than ITE which suggested that this is a local trend. For this reason, the lower ITE rates were not used. It should be noted that trip rates for shopping centers vary according to the size of the center.

Table 2-12 shows four examples of the trip rates for shopping centers of varying sizes. The linear regression equation from which these rates were developed is shown in Table 2-13 for the AM and PM peak hours. The table also shows the proportion of trips entering and exiting the shopping center.

Table 2-11
Marina del Rey Traffic Study
Recommended Marina del Rey Trip Generation Rates AM and PM Peak

		AM PEAK			PM PEAK		
	Units	In	Out	Total	In	Out	Total
Restaurant	Seats	0.042	0.034	0.076	0.159	0.091	0.250
Hotel	Rooms	0.221	0.184	0.406	0.159	0.194	0.353
Shopping Center	KSF	This rate will vary according to size (1)					
Office	KSF	This rate will vary according to size (2)					
Apartments	DU	0.062	0.287	0.349	0.223	0.103	0.326
Marina	Slips	0.044	0.083	0.126	0.050	0.087	0.137

(1)Refer to Tables 2-12 and 2-13.
(2)Refer to Tables 2-14 and 2-15.

KSF = 1,000 square feet
DU = Dwelling Unit

Table 2-12
Marina del Rey Traffic Study
Shopping Center Trip Rates AM and PM Peak

		AM PEAK			PM PEAK		
Size	Units	In	Out	Total	In	Out	Total
50	KSF	4.464	4.120	8.584	6.651	6.390	13.042
100	KSF	2.877	2.655	5.532	4.895	4.703	9.598
150	KSF	2.348	2.167	4.515	4.309	4.140	8.450
200	KSF	2.083	1.923	4.007	4.017	3.859	7.876

Table 2-13
Marina del Rey Traffic Study
Shopping Center Vehicle Trip Generation Equations

		Proportion of Trips	
Average Weekday	Equation	Entering	Exiting
AM Peak Hour	Trips = 2.48(X) + 305.15	0.52	0.48
PM Peak Hour	Trips = 6.15(X) + 344.38	0.51	0.49

X = Area in 1,000 gross square feet of leasable area.
KSF = 1,000 square feet

Offices:

No general office was surveyed in June. The Barton Aschman survey in December considered offices which were not adequately occupied. For this reason the ITE trip rates for offices were considered to be appropriate for the Marina area. It should be noted that trip rates for offices also vary according to the size of the development.

Table 2-14 shows a summary of the ITE trip rates for offices for various sizes. A more detailed list of rates is available in the Trip Generation Manual itself (ITE, 4th Edition, 1987). For reference purposes, Table 2-15 shows the ITE linear regression equation from which the rates are calculated.

Apartments:

It was decided to average the trip rates from June and December for apartments because no seasonality was observed and rates were closely clustered in both surveys for this land use. The trip rates were consistently lower than ITE rates. It is known that in general Marina residents tend to be older in average age, have a smaller average household size, fewer school-age children, and a higher rate of working at home, all of which could explain the consistent lower trip generation rates. This, along with a good sample size of five from both surveys, was considered a valid reason to use the lower Marina rates rather than the higher ITE rates.

Marinas/Yacht Clubs:

It was agreed that an overall trip rate for this land use should be developed by averaging all the June and December rates; there was not felt to be significant seasonality in trip generation. This is a very specialized land use and unique to the Marina. Therefore, the rates produced by the surveys were concluded to be more appropriate to the Marina del Rey area than the general ITE rates.

2.5 Area A Analysis

This section addresses land use and transportation planning issues related to Area A within the Marina del Rey area. It reviews the proposed buildout of Area A as allowed by the existing Land Use Plan (LUP)--Plan Summary, Page 4 and Design Principles for New Development Chapter, page II-97, the estimated traffic impacts of the proposed Playa Vista development as reflected in the LUP (Circulation Chapter, Page II-143) and the related proposed transportation improvements (Circulation Chapter, Page II-148). The revised Playa Vista plans and their impact on the existing Marina will also be discussed.

Table 2-14
Marina del Rey Traffic Study
General Office Building Trip Rates AM and PM Peak*

Size	Units	AM PEAK In	AM PEAK Out	AM PEAK Total	PM PEAK In	PM PEAK Out	PM PEAK Total
50	KSF	1.921	0.287	2.209	0.354	1.860	2.214
100	KSF	1.744	0.261	2.004	0.315	1.653	1.968
150	KSF	1.647	0.246	1.894	0.294	1.543	1.837
200	KSF	1.582	0.236	1.819	0.280	1.470	1.749

**ITE Trip Generation Manual (4th Ed.)*

Table 2-15
Marina del Rey Traffic Study
General Office Building Trip Generation Equations*

Average Weekday	Equation	Proportion of Trips Entering	Proportion of Trips Exiting
AM Peak Hour	$Ln(T) = 0.86Ln(A) + 1.34$	0.87	0.13
PM Peak Hour	$Ln(T) = 0.83Ln(A) + 1.46$	0.16	0.84

T = Two way volume of traffic or total trip ends
A = Area in 1,000 gross square feet of building area.
Ln = Natural Logarithm
KSF = 1,000 square feet
**ITE Trip Generation Manual (4th Ed.)*

2.5.1 Description of Buildout For Area A as Allowed by the LUP

The general policy for development of Area A was clearly set in the Design Principles for New Development chapter of the LUP (pages II-96, 97), which states that "...the most coastally-oriented use of [Area A] would be to develop it as an extension of the existing Marina, reflecting its mix of uses and its stress upon water oriented recreational and visitor serving uses". The plan further asserts that "...plans to develop this vacant parcel into an extension of the existing Marina should include water-oriented residential uses".

The proposed construction of hotels, restaurants and the extension of Fisherman's Village, in combination with a shoreline promenade linking these uses, was seen as clearly fulfilling these aims. A major new boat basin was proposed by Playa Vista development in Area A surrounded by a mix of visitor serving and residential land uses similar to the existing Marina (see Figure 2-4). New housing development in Area A is required to have 15 percent low and moderate income housing units. Table 2-16 is a summary of the distribution of the designated land uses for the 139 acre (plus 2 acres in parcel 61) Area A as reflected in the Land Use Plan (page II-97):

Table 2-16. Area A Land Use Designations and Acreage

Land Use Type	Acres
Water (Marina basin)	40
Hotel	22
Residential III	33
Residential V	4
Commercial (Visitor serving)	5
Mixed Commercial/Marina Commercial/Office/ Residential IV (100 units)	3
Open Space (Shoreline park and south shore mini parks)	15
Parking	7
Roads	12
TOTAL	**141**

The following amounts of new development were proposed by the Playa Vista plan for Area A, in conformity with the buildout allowed in the LUP (page II-143).

Residential	1,226 Dwelling Units
Retail (visitor serving commercial)	200,000 SF
Hotel	1,800 Rooms
Marina	40 Acres (including 26 acres of boat slips)

MARINA DEL REY TRAFFIC STUDY ADDENDUM

Final Report

prepared for

Los Angeles County
Department of Regional Planning

and

Maguire Thomas Partners

by

DKS Associates
May, 1994

2.0 REVIEW OF LADOT REPORT

2.1 Introduction

The draft 1991 LADOT report prepared by Barton Aschman Associates is a Technical Appendix to the Playa Vista Phase 1 DEIR which was published in draft form on September 28, 1992 and includes a number of assumptions about trip generation. The 1991 DKS report made use of specific Marina del Rey trip generation surveys to develop rates appropriate to the locale. This section of the Addendum will compare the trip generation assumptions from the two reports and will make recommendations on which rates are the most appropriate for an analysis of Area A traffic impacts.

2.2 Review of Trip Generation Rates

2.2.1 LADOT Report Trip Generation Rates

According to the LADOT report, the trip generation data "...weredetermined from data published by the Institute for Transportation Engineers (ITE) *Trip Generation Manual*, Third Edition (1983) and the Coastal Transportation Corridor Specific Plan (CTCSP) ordinance as proposed in 1991."[1] Table 2-1 summarizes the trip rates used for the land uses associated with the Area A development for the AM and PM peak hours.

Pass-by trips referred to in the table are trips which have a stop en route between two points, such as a stop at a supermarket while traveling to work. If the work trip generated by the office and the supermarket trip are both used separately there will be double counting. Consequently, retail land use trip generation is usually reduced by 10 percent to account for these en route or "pass-by" trips.

These trip generation rates have been approved by LADOT. It should be noted that the LADOT report also assumes a number of trips generated by land uses in Area A which are destined to other land uses in Area A. These trips are completely internal to Area A.

---

[1] Playa Vista Transportation Analysis, Appendix A Methodology, August 1991 - Barton Aschman Associates, Inc.

Table 2–1
Addendum to Marina del Rey Traffic Study
Trip Generation Comparison for Area A Land–Uses
Summary

	AREA A UNITS	TYPE	AM DKS AM TRIPS	AM LADOT AM TRIPS	AM LADOT/ DKS RATIO	PM DKS PM TRIPS	PM LADOT PM TRIPS	PM LADOT/ DKS RATIO
RESIDENTIAL	2576	DU	793	1020	1.29	739	1270	1.72
RETAIL	75	KSF	380	143	0.38	293	532	1.81
HOTEL	450	ROOMS	160	337	2.11	140	278	1.99
MARINA	700	SLIPS	78	74	0.95	85	271	3.19
OFFICE	125	KSF	214	259	1.21	208	259	1.24
COMMUNITY CNTR	20	KSF	20	20	1.00	24	24	1.00
TOTAL			**1645**	**1852**	**1.13**	**1489**	**2633**	**1.77**

Note: A 12 percent reduction for internal trips has been applied to all numbers
TAB11/29823

2.2.2 DKS Associates Report Trip Generation Rates

The trip rates used by DKS Associates in the 1991 report were derived from local trip generation surveys in the Marina and from the Institute for Transportation Engineers (ITE) *Trip Generation Manual*, Fourth Edition (1987). The derivation of the rates is described in detail in the 1991 report. Table 2-1 summarizes the rates used as applied to the revised Playa Vista land use plan.

2.2.3 Comparison Between Trip Generation Rates

Table 2-2 compares the trip generation rates from the LADOT study and the DKS Associates study in the context of the revised Area A land use plan. In the AM peak hour the DKS rates produce a total of 1,645 trips. The LADOT rates produce a total of 1,852 trips. This represents similar trip totals to the DKS rates. In particular, the table shows that the DKS rate for retail is substantially greater than the LADOT rate. However, the LADOT rate for hotel rooms is higher than the DKS rate. In the PM peak hour the DKS rates produce a total of 1,489 trips, whereas the LADOT rates produce a total of 2,633 trips. This represents about 77 percent more trips. In the PM case, the LADOT rates for residential and hotel land uses are substantially higher. In the case of Marina slips, the LADOT rates are 3.21 times higher than the DKS rates. This contributes to the higher overall trip generation.

As shown in Table 2-3, trip generation equations are used when the rate changes relative to the size of the development instead of being constant. The Appendix to this Addendum reproduces the source of the rates and the equations, where used.

2.2.4 DKS Rates Versus ITE Rates

Table 2-3 compares the DKS rates used for the Area A trip generation with ITE rates from the 3rd, 4th and 5th edition Trip Generation Manuals. The results of this analysis are discussed below:

> For residential land use, the DKS rates are consistently lower than the ITE rates. The latest ITE rates in the 5th Edition are significantly lower than the earlier editions and are closer to the DKS rates.
>
> For retail land use, the DKS rates are significantly higher than the ITE rates for the 3rd and 4th editions. (DKS used a linear regression equation to develop the rates).
>
> For hotel land uses, the DKS rates are also lower than the ITE rates for all editions.

Table 2–2
Addendum to Marina del Rey Traffic Study
Peak Hour Trip Generation Comparison: DKS vs. LADOT
Area A Land Uses

DKS Trips and Rates

			RATES				TRIPS (see note)					
			AM		PM		AM			PM		
AREA A	UNITS	TYPE	IN	OUT	IN	OUT	IN	OUT	TOTAL	IN	OUT	TOTAL
RESIDENTIAL	2576	DU	0.062	0.287	0.223	0.103	142	651	793	504	235	739
RETAIL	75	KSF	3.077	3.333	2.810	2.120	182 *	198 *	380	167 *	126 *	293
HOTEL	450	ROOMS	0.221	0.184	0.159	0.194	87	73	160	63	77	140
MARINA	700	SLIPS	0.044	0.083	0.050	0.087	27	51	78	31	54	85
OFFICE	125	KSF	equation	equation	equation	equation	186	28	214	33	175	208
COMMUNITY CNTR	20	KSF	0.670	0.410	0.390	0.990	12	8	20	7	17	24
TOTAL							**636**	**1009**	**1645**	**805**	**683**	**1489**

LADOT Trips and Rates

			RATES				TRIPS (see note)					
			AM		PM		AM			PM		
AREA A	UNITS	TYPE	IN	OUT	IN	OUT	IN	OUT	TOTAL	IN	OUT	TOTAL
RESIDENTIAL	2576	DU	0.08	0.37	0.38	0.18	181	839	1020	862	408	1270
RETAIL	75	KSF	1.25	1.15	equation	equation	75 *	68 *	143	218 *	313 *	532
HOTEL	450	ROOMS	0.57	0.28	0.35	0.35	226	111	337	139	139	278
MARINA	700	SLIPS	0.08	0.04	0.13	0.31	49	25	74	80	191	271
OFFICE	125	KSF	2.10	0.25	0.47	1.88	231	27	259	52	206.8	259
COMMUNITY CNTR	20	KSF	0.670	0.410	0.390	0.990	12	8	20	7	17	24
TOTAL							**775**	**1077**	**1852**	**1358**	**1275**	**2633**

NOTES
All trip totals include a 12 percent reduction for Internal Trips
Some trip values have been adjusted slightly to remove the effects of rounding from the totals
Trips for Youth Hostel and Marine Research Center are not included
* Includes 10 percent "pass-by" trip reduction
LADOT equations are documented in the draft "Playa Vista Transportation Analysis – Appendix A (Barton Aschman Associates, August 1991)
DKS Assciates equations are documented in Marina del Rey Traffic Study (DKS Associates, January 1991)

Tab7/29823

Table 2–3
Addendum to Marina del Rey Traffic Study
Peak Hour Trip Generation Comparison DKS Rates vs 3rd/4th/5th Edition ITE
Area A Land–Uses

	AREA A		DKS RATES		ITE 3RD EDITION		ITE 4TH EDITION		ITE 5TH EDITION	
	UNITS	TYPE	AM RATES	PM RATES	AM RATES	PM RATES	AM RATES	PM RATES	AM RATES	PM RATES
RESIDENTIAL	2576	DU	0.349	0.326	0.50	0.70	0.532	0.673	0.44	0.49
RETAIL	75	KSF	6.410	4.930	1.99 **	2.25 **	No Peak Hour Rates Provided		6.410	4.930
HOTEL	450	ROOMS	0.406	0.353	0.85	0.73	0.704	0.664	0.67	0.76
MARINA	700	SLIPS	0.126	0.137	0.09	0.17	0.09	0.17	0.08	0.19
OFFICE*	125	KSF	2.107	2.091	2.00	2.03	2.107	2.091	2.06	2.06

NOTES
None of the above rates include a reduction for pass–by trips or internal trips
* These rates are for illustration only, actual rates vary with size and therefore, with traffic analysis zone. This comparison aggregates these land–uses together.
** This represents entering trips only, no rates are provided for exiting trips

TAB10/dsk2623

For marina slips, the DKS rates are higher than all the ITE rates. However the difference is not particularly large.

For office land use, the DKS rates are the same as the 4th edition ITE rates and are similar to the 3rd and 5th edition rates.

The differences between the DKS rates and ITE rates are explained more fully in the 1991 "Marina del Rey Traffic Study" by DKS Associates. In essence, the difference is caused by the use of actual local rates sampled in the Marina rather than the country-wide averaged rates used in the ITE manuals. ITE always recommends that traffic studies should make use of local data where this is available and appropriate. This is discussed further in the next section.

2.2.5 Recommendations on Trip Generation Rates For Area A

Wherever possible the DKS Associates trip rates were derived from local surveys specific to Marina del Rey to develop site specific rates. Where such data were not available, the latest trip generation rates developed by the ITE were used - which at the time of the first report was the 4th Edition *Trip Generation Manual* (1987). The ITE manual encourages the use of customized trip generation rates because many factors can exist which can make a local area produce different rates from the nationally averaged rates presented in the ITE Trip Generation Manuals. The manual suggests that at "...specific sites, the user may wish to modify the trip generation rate presented...because of special characteristics of the site or the surrounding area."[2] The ITE manual also advises the user to exercise "..extreme caution when utilizing data that is based on a small number of studies."[3] This was the case with several of the land uses listed in ITE.

The Marina del Rey area is not a typical environment. Trips will be significantly affected by the unusual nature of the land use. For this reason, the ITE recommendations on local surveys take on more importance. No better rates can be developed than those derived from land uses within the general study area in question. For these reasons, we recommend that rates specified in the DKS Associates Traffic Study of 1991 be used in this Addendum.

---

[2] ITE *Trip Generation Manual*, 1987

[3] Ibid., 1987.

RAJU Associates, Inc.

524 S. Rosemead Blvd.,
2nd Floor,
Pasadena, CA 91107
Voice:(626) 792-2700
Fax: (626) 792-2772

MEMORANDUM

TO: Mr. Santos Kreimann, LACDBH
CC: Mr. Gary Jones, LACDBH
Ms. Charlotte Miyamoto, LACDBH
Mr. Barry Kurtz, LACDBH
Ms. Andriette Culbertson, Attorney At Law

FROM: Srinath Raju, P.E.

SUBJECT: Parking Evaluation at Lot 9 (Parcel NR)

DATE: November 30, 2009 **REF:** RA299

This memorandum briefly describes the analysis and evaluation of parking at the Public Parking Lot 9 located on Parcel NR within the Marina Del Rey area of the County of Los Angeles, California. This lot is located within the Mother's Beach Activity Area and is utilized by users of Mother's Beach along with Parking Lots 8, 10 and 11 on Parcels OT, IR and GR, respectively. The user population of Mother's Beach Activity Area includes patrons who visit the Mother's Beach attractions, kayakers, recreational boat users, joggers and walkers. This evaluation has been performed in response to comments provided by the Marina Del Rey Community Boating Council in its comment letter dated July 22, 2009 to the Design Control Board.

As stated above, Parking Lot 9 is currently utilized by patrons who are kayakers and other recreational boat users as well as joggers and walkers within the Mother's Beach Activity Area. Parking demands at this Lot 9 as well as at Lots 8, 10 and 11 within Mother's Beach Activity Area were noted down on peak weekdays and peak weekend days during long weekends prior to or after major holidays when parking utilization at all the public parking lots within Marina Del Rey have been observed to be at their maximum. These demands are indicated in Table 1 for Lot 9 and Table 2 for the Mother's Beach Activity Area. Also, parking demand data was obtained for a typical weekday and weekend day to examine the magnitude of typical utilization in relation to the peak observed utilization.

TABLE 1
PARKING DEMANDS OBSERVED AT LOT 9 (PARCEL NR)

Date:	Time of Day				Peak Demand	Peak % Occupancy
	10:00 AM	1:00 PM	4:00 PM	8:00 PM		
Weekdays:						
5/27/05	8	11	9	13	13	7%
7/1/05	15	16	13	27	27	15%
9/2/05	11	9	14	13	14	8%
5/25/07	20	17	18	20	20	11%
8/31/07	35	21	21	25	35	19%
10/25/07	9	10	15	9	15	8%
9/4/09	10	13	12	17	17	9%
Weekend Days:						
7/5/09	29	38	30	41	41	22%
5/28/05	21	34	33	17	34	18%
5/29/05	18	20	26	17	26	14%
7/2/05	25	36	34	22	36	19%
7/3/05	22	39	38	22	39	21%
9/3/05	27	38	33	44	44	24%
9/4/05	37	38	30	24	38	20%
5/26/07	32	34	28	33	34	18%
5/27/07	28	31	36	30	36	19%
9/1/07	37	39	38	41	41	22%
9/2/07	36	45	65	29	65	35%
11/3/07	15	11	12	10	15	8%
9/5/09	42	56	43	11	56	30%
9/6/09	36	44	45	14	45	24%
12/8/07	16	20	21	22	22	12%
90th Percentile observed parking demand					45	24%

NOTE: Peak % occupancy was calculated using total existing parking supply of 186 spaces.

TABLE 2
OBSERVED PARKING DEMANDS AT MOTHER'S BEACH ACTIVITY AREA

Date:	Time of Day				Peak Demand	Peak % Occupancy
	10:00 AM	1:00 PM	4:00 PM	8:00 PM		
Weekdays:						
5/27/05	37	62	50	81	81	10%
7/1/05	58	89	66	201	201	24%
9/2/05	45	57	61	154	154	18%
5/25/07	61	66	61	135	135	16%
8/31/07	84	77	69	92	92	11%
10/25/07	62	112	66	77	112	13%
9/4/09	94	120	109	190	190	23%
Weekend Days:						
7/5/09	160	171	207	253	253	30%
5/28/05	98	134	158	101	158	19%
5/29/05	88	142	173	119	173	21%
7/2/05	87	128	160	128	160	19%
7/3/05	119	216	282	152	282	33%
9/3/05	89	148	199	128	199	24%
9/4/05	114	175	255	103	255	30%
5/26/07	92	130	137	162	162	19%
5/27/07	97	177	209	150	209	25%
9/1/07	105	132	136	184	184	22%
9/2/07	119	223	273	206	273	32%
11/3/07	93	104	86	87	104	12%
9/5/09	147	214	235	151	235	28%
9/6/09	186	274	348	220	348	41%
12/8/07	123	146	132	173	173	21%
90th Percentile observed parking demand					273	32%

NOTE: Peak % occupancy was calculated using total existing parking supply of 843 spaces.

It is worth noting that peak parking data was collected during the years 2005, 2007 and 2009. The long weekends and holiday weekdays when surveys were conducted to obtain peak parking demand information included the Memorial Day (end of May), Independence Day (July 4th) and Labor Day (September) holidays. Boat Parade Day parking demand data was also solicited and obtained. Overall, parking demand data for twenty two days (seven weekdays and fifteen weekend days) from three different calendar years were compiled and assembled for this analysis.

From Table 1, the following observations can be noted:

1. The peak parking demand at Lot 9 during weekdays was observed to be 35 spaces. The range of peak parking demands on weekdays was 13 to 35 spaces, translating to 7% to 19% parking occupancy out of the current parking supply of 186 spaces. The public parking lot 9 on parcel NR is greatly under-utilized during approximately 250+ non-holiday weekdays, every year.
2. The peak parking demand at Lot 9 during weekend days was observed to be 65 spaces. The next highest peak parking demand observed was 56 spaces. The range of peak parking demands on weekend days was 22 to 65 spaces, translating to 12% to 35% occupancy out of the current parking supply of 186 spaces. Again, the public parking lot 9 is currently very under-utilized during the remaining non-holiday weekend days, every year.
3. The 90th percentile observed parking demand at Lot 9 was 45 spaces. Typically, 90th - percentile demand is used as the design day demand for most uses. However, since many recreational uses utilize all of the parking lots within the Mother's Beach Activity Area, an evaluation of the Activity Area parking demands as a whole is presented in the subsequent sections of this technical memorandum.
4. The Marina Del Rey Community Boating Council noted that a number of their members currently utilize or have utilized in the past, private parking at Organic Panificio parking lot on Parcel 33 to avoid payment of parking fees at the public parking lot 9 on Parcel NR. Since the patrons are currently parking farther away from the recreational boating attractions as noted above, there would parking available at Lots GR and/or IR, if necessary, in the future. Additionally, there is the consideration of provision of potential

boating amenities (rowing activities) in the future to move to the launch area of Parcel 77 in the Chase Park Activity Area where significant additional parking is being proposed.

An evaluation of the Mother's Beach Activity Area parking demands is presented in Table 2. The overall public parking supply at Mother's Beach Activity Area is provided by Lots 8, 9, 10 and 11 on Parcels OT, NR, IR and GR, respectively. From Table 2, the following observations can be made.

1. The peak parking demand within the Mother's Beach Activity Area during weekdays was observed to be 201 spaces at 8 PM in the evening. The maximum observed peak weekday parking demand during daytime was 120 spaces. The range of peak parking demands on weekdays was 81 to 201 spaces, translating to 10% to 24% parking occupancy out of the current parking supply of 843 spaces. The Public Parking Lots 8, 9, 10 and 11 on Parcels OT, NR, IR and GR, respectively, are all greatly under-utilized during approximately 250+ non-holiday weekdays, every year.
2. The peak parking demand within the Mother's Beach Activity Area during weekend days was observed to be 348 spaces. The next highest peak parking demand observed was 282 spaces. The range of peak parking demands on weekend days was 104 to 348 spaces, translating to 12% to 41% occupancy out of the current parking supply of 843 spaces. Again, the Public Parking Lots 8, 9, 10 and 11 are currently very under-utilized during the remaining non-holiday weekend days, every year.
3. The 90th percentile observed parking demand within the Mother's Beach Activity Area was 273 spaces at 32% peak occupancy. An examination of future peak parking demands provided in the *Right Sizing Parking Study for the Public Parking Lots in Marina Del Rey, California*, prepared by Raju Associates, Inc., November 2009 indicates that the 90th-percentile future public parking demand within this activity area including anticipated growth to the year 2030 would be equal to 360 spaces. Typically, 90th -percentile demand is used as the design day demand for most uses. However, for the purposes of this study, the 90th percentile peak public parking demand was increased by 10% to allow for easy access to and circulation within various parking lots serving the activity area. It was recommended that the Mother's Beach Activity Area provide a minimum of 400 public parking spaces to accommodate the future overall peak parking demands.

4. The currently-proposed parking plan for Mother's Beach Activity Area including the "pipeline projects" proposed by the County, calls for provision of a total of 652 public parking spaces at the Lots 8, 9, 10 and 11 on Parcels OT, NR, IR and GR, respectively. Therefore, there would be more than adequate public parking supply available in the currently proposed plan with the "pipeline projects" in place.

The Marina Del Rey Community Boating Council noted in its comment letter that "picking a few days to study parking and extrapolating though the whole year is inadequate to determine parking usage…" and went to state that "Stakeholders who are actual daily users were never interviewed to determine if the times and dates were adequate to capture the parking usage". One of the key elements of parking studies is to collect parking demand data in a systematic yet random fashion without warning the users of such activity in order to obtain actual demand data as it normally occurs.

In order to determine potential peak usage, parking revenue information was solicited from the Los Angeles County Department of Beaches and Harbors. The monthly revenue stream from the financial years 2000-01 to 2008-09 was analyzed. This detailed analysis of the actual revenue stream from the public parking lots serving Mother's Beach Activity Area (Lots 8, 9, 10 and 11 combined) as well as the Parking Lot 9 on Parcel NR is provided in Table 3. The highest revenue month(s) reflected by the percent of yearly revenue of each financial year has been highlighted in this Table.

From Table 3, the following observations can be made:

1. In the Mother's Beach Activity Area, the month of July generated the highest parking activity (reflected in percent revenue figures) in five of the nine financial years. The month of September generated the highest parking activity in two additional financial years and generated approximately the same as in July in another financial year. In other words, the months of July and September generated the highest parking activity within this Activity Area in 7 of the 9 financial years, per the revenue data.
2. In Lot 9, the months of July and September accounted for peak parking activity in five of the nine financial years that revenue data was analyzed. The month of August accounted for an additional two years when the highest parking activity was reflected in the revenue

TABLE 3
MOTHER'S BEACH AND LOT 9 REVENUE STREAM ANALYSIS

LOCATION	YEAR	PERCENT REVENUE BY MONTH OF FINANCIAL YEAR												TOTAL FOR THE YEAR
		JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	
MOTHER'S BEACH (LOTS 8,9,10 & 11)	2000-01	18%	15%	13%	12%	5%	5%	4%	4%	6%	6%	6%	7%	100%
	2001-02	19%	16%	3%	22%	1%	2%	6%	5%	7%	10%	3%	7%	100%
	2002-03	20%	16%	5%	19%	2%	7%	5%	5%	5%	6%	8%	4%	100%
	2003-04	11%	20%	4%	2%	21%	9%	5%	5%	2%	3%	7%	11%	100%
	2004-05	9%	8%	24%	3%	10%	7%	4%	5%	6%	4%	12%	8%	100%
	2005-06	15%	23%	13%	7%	2%	4%	6%	3%	7%	5%	7%	8%	100%
	2006-07	13%	15%	18%	4%	5%	4%	4%	5%	5%	6%	9%	11%	100%
	2007-08	14%	11%	14%	14%	6%	7%	4%	3%	6%	8%	7%	8%	100%
	2008-09	20%	13%	9%	8%	5%	4%	2%	6%	4%	6%	6%	15%	100%
LOT 9 ON PARCEL NR	2000-01	20%	10%	8%	9%	3%	6%	4%	2%	12%	11%	7%	7%	100%
	2001-02	13%	12%	8%	4%	4%	2%	2%	4%	4%	5%	7%	34%	100%
	2002-03	13%	17%	7%	7%	8%	4%	7%	4%	6%	11%	9%	7%	100%
	2003-04	13%	15%	9%	5%	5%	6%	7%	5%	7%	7%	8%	11%	100%
	2004-05	13%	13%	11%	6%	5%	8%	4%	4%	6%	6%	8%	16%	100%
	2005-06	13%	8%	16%	7%	6%	5%	5%	6%	7%	5%	6%	16%	100%
	2006-07	12%	12%	17%	7%	5%	4%	5%	3%	6%	6%	11%	12%	100%
	2007-08	15%	15%	14%	6%	6%	5%	5%	5%	6%	8%	8%	8%	100%
	2008-09	16%	12%	12%	6%	5%	4%	3%	6%	8%	7%	10%	11%	100%

Source: Los Angeles County Department of Beaches & Harbors data.

3. The Right Sizing Parking Study conducted for the Public Parking Lots in Marina Del Rey by Raju Associates, Inc., dated November 2009, utilized the peak parking demands of the busiest non-holiday weekdays and weekend days in May, July, August and September from various years in its analysis and evaluation of parking demands and consequently, in the identification of minimum public parking requirements by activity area.

The Marina Del Rey Community Boating Council comment letter also states that the "Parking Study relies heavily on quantitative data …", and goes on to further state that "the Parking Study does not reflect real life usage of the lot". The letter provides information on an informal study conducted on Saturday, November 22, 2008. It also states that the "Outrigger and Rowing Clubs asked their members to park in the pay lot instead of parking at the adjacent restaurant parking lots". The results (provided in the comment letter) for that day are the following:

7:30 AM → 45 vehicles
8:15 AM → 71 vehicles
8:45 AM → 91 vehicles
11:30 AM → 73 vehicles

Additionally, the comment letter states that these results are reflective of only a typical Saturday in November, with the numbers being significantly higher in summer (possibly 30 more vehicles at the peak time).

In response to these assertions, the Los Angeles County Department of Beaches and Harbors staff conducted parking demand surveys at the Lots 9, 10 and Organic Panificio Lot at the same times as noted above on a summer Friday and weekend (July 10 – 12, 2009). The results of these surveys are presented in Table 4. It can be observed from Table 4, that the peak parking demand at Lot 9 was 17 spaces on both Saturday and Sunday at the same times noted above. The Organic Panificio Lot noted more utilization at the same times but included all other recreational users namely joggers, walkers and beach-goers, as well.

TABLE 4

SUMMARY OF MARINA BEACH PARKING SURVEY - SUMMER 2009

MARINA BEACH PARKING SURVEY - FRIDAY

SURVEY TIME	SURVEY DATE	PARCEL NR	PARCEL IR	PARCEL 33	CASA ESCOBAR	TOTALS
7:30am	7/10/2009	11	15	21	0	47
8:15am	7/10/2009	9	10	19	0	38
8:45am	7/10/2009	13	7	17	0	37
10:00am	7/10/2009	8	5	23	0	36
11:30am	7/10/2009	11	6	19	0	36

MARINA BEACH PARKING SURVEY - SATURDAY

SURVEY TIME	SURVEY DATE	PARCEL NR	PARCEL IR	PARCEL 33	CASA ESCOBAR	TOTALS
7:30am	7/11/2009	15	56	46	0	117
8:15am	7/11/2009	17	64	66	0	147
8:45am	7/11/2009	17	66	72	0	155
10:00am	7/11/2009	14	58	70	0	142
11:30am	7/11/2009	12	61	65	0	138

MARINA BEACH PARKING SURVEY - SUNDAY

SURVEY TIME	SURVEY DATE	PARCEL NR	PARCEL IR	PARCEL 33	CASA ESCOBAR	TOTALS
7:30am	7/12/2009	13	62	61	0	136
8:15am	7/12/2009	12	65	70	0	147
8:45am	7/12/2009	16	71	73	0	160
10:00am	7/12/2009	17	60	78	0	155
11:30am	7/12/2009	11	69	54	0	134

In conclusion, the following key findings are relevant for the Right Sizing of Public Parking Spaces in Marina Del Rey:

1. Detailed Public Parking demand surveys were conducted at all the public parking lots in Marina Del Rey. From these observed peak public parking demand numbers, the future potential public parking demand numbers were estimated.
2. The potential future public parking demand estimates also take into account the ambient growth due to population increase in the region as well as potential induced public parking demand, if any, due to the "pipeline projects" in Marina Del Rey. Additionally, these future estimates also account for the increased demand due to expansion of existing public amenities and/or provision of new amenities in various Activity Areas including Mother's Beach and Chace Park Areas.
3. The parking demand surveys conducted indicate that all the parking lots within the Mother's Beach Activity Area (Lots 8,9,10 and 11) are all very under-utilized currently. Even with the proposed "Pipeline Projects" in place, the parking analysis indicates that more than adequate parking supply would be available at all times, with the currently proposed parking plan for the Mother's Beach Activity Area.
4. Potential improvements to the Chace Park Activity Area to incorporate the rowing activity from Mother's Beach to move to the launch area of Parcel 77 could further reduce the parking demand at Mother's Beach. This parking demand would potentially move to Chace Park Activity Area when this rowing facility is moved to that area.

If you have any questions, please let us know.